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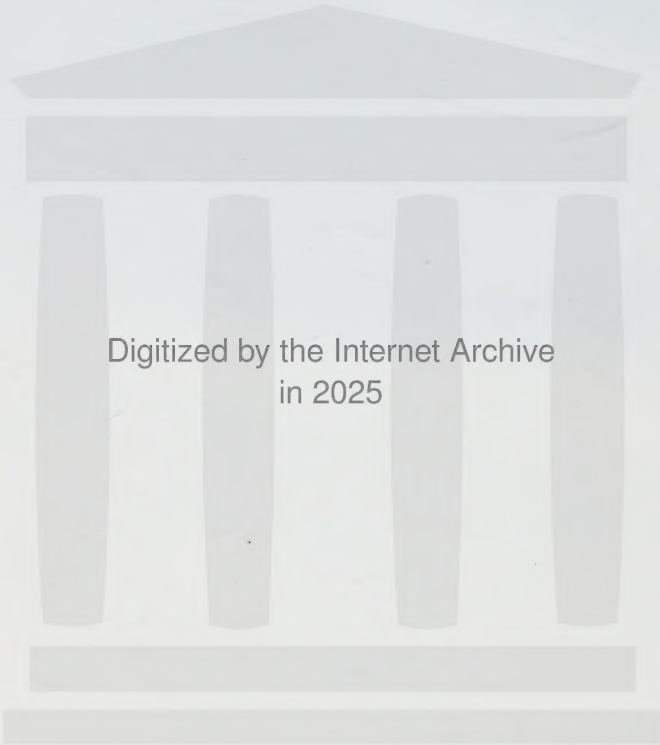

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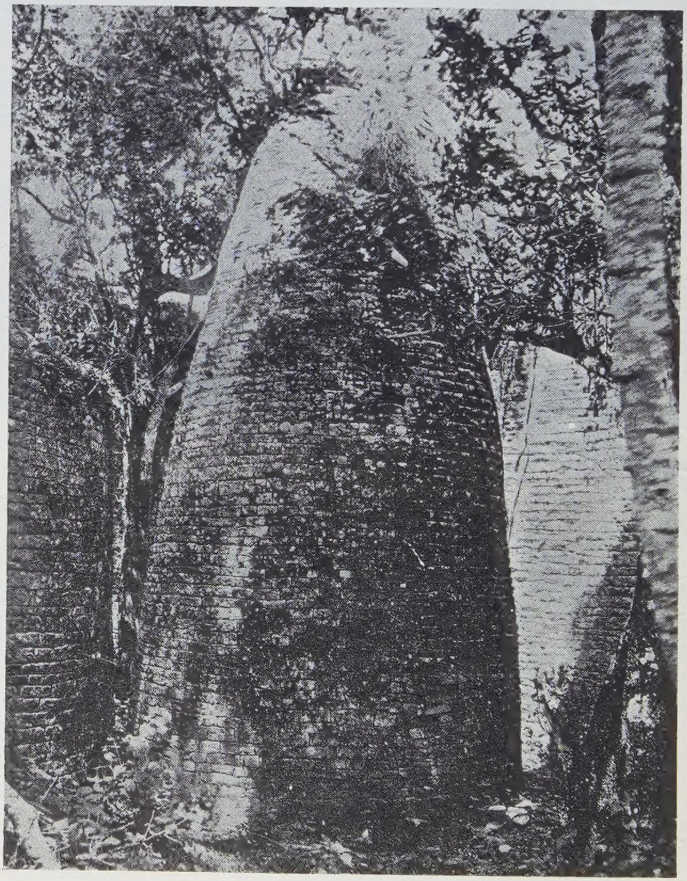
THE ANCIENT RUINS OF RHODESIA

"The truth of Ophir must, as from a deep myne, be drawne out of Moses," G

PURCHAS, I. 2



CONICAL TOWER, ELLIPTICAL TEMPLE ZIMBABWE

THE ANCIENT RUINS OF RHODESIA

(MONOMOTAPÆ IMPERIUM)

ICHARD ICHLIN

BY

R. N. HALL

AND

W. G. NEAL

WITH OVER SEVENTY ILLUSTRATIONS, MAPS, AND PLANS

SECOND EDITION

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DEDICATED, WITH PERMISSION

TO

THE HON. A. WILMOT, K.S.G., F.R.G.S.

MEMBER OF THE LEGISLATIVE COUNCIL OF CAPE COLONY
AUTHOR OF "MONOMOTAPA (RHODESIA): ITS MONUMENTS AND ITS HISTORY FROM THE MOST ANCIENT TIMES TO THE PRESENT CENTURY"

AS AN EXPRESSION OF
THE DEEP AND WIDELY SPREAD FEELING OF GRATITUDE
EXISTING AMONG SOUTH AFRICANS
FOR HIS EXHAUSTIVE RESEARCHES INTO
THE ANCIENT HISTORY OF RHODESIA
AND FOR HIS DISINTERRING
FROM THE FORGOTTEN RECORDS IN
THE ARCHIVES OF THE VATICAN AND LISBON
INFORMATION CONCERNING THE ANCIENT RUINS OF RHODESIA
AND THE MEDIÆVAL RACES OF
MONOMOTAPÆ IMPERIUM

PREFACE TO THE SECOND EDITION

THE early call for a second edition of this work and the absence of the authors in South Africa have not afforded them the opportunity which they desired of making such extensive additions to the early descriptions of ruins, or of including descriptions of other ancient ruins in this country, which have been discovered since the first edition appeared. In their absence Professor A. H. Keane has very kindly revised the work on their behalf.

The subject of the investigations concerning the ancient monuments of Southern Rhodesia is one that is rapidly advancing, and the authors are still busily prosecuting their researches. Mr. R. N. Hall, F.R.G.S., is now completing a period of three years' examination work at Great Zimbabwe, and the results of his work will reveal some entirely fresh features in ancient architecture and relics, all which points have yet to be laid before scientists for their consideration. This will be done in *The Great Zimbabwe*, which will be published during 1905. The results of his recent examination of the ruins of forts, stone terraces, and aqueducts in the Inyanga district, together with the results of similar work at many newly discovered ruins of importance in Southern Mashonaland, will respectively appear in separate form early in 1905.

HAVILAH CAMP, GREAT ZIMBABWE,
RHODESIA, S.A.
March, 1904

PREFACE

THIS work is presented to the reader as a contribution towards the preparation of that brief, which, when all the possible evidences forthcoming from the hundreds of ancient ruins in Rhodesia have been secured, shall be submitted to acknowledged archæologists and antiquarians for their final pronouncement as to the origin of those ancient peoples who have left such substantial evidences of past civilisation and industry in the territories known to-day as Southern Rhodesia.

The authors are forced to admit that the theory of the successive occupations of Rhodesia by South Arabians and Phœnicians has, so far as researches have been made, exceedingly strong claims for acceptance.

With reference to Rhodesia being the land from which the gold of Ophir was obtained, it may be noticed that the recent discoveries in Rhodesia of a vast number of massive ruins, beyond the few mentioned either by Mr. Theodore Bent* or Dr. Schlichter,† with additional "finds" further evidencing the practice by the ancients of Phallic worship, the arguments in favour of the theory of Rhodesia being the source not only of King Solomon's gold, but also of the wealth in gold possessed by the Sabæan nation and the Tyrian and Sidonian kingdoms, references to which are so frequent in Holy Writ, have been very considerably

* *The Ruined Cities of Mashonaland*, by J. THEODORE BENT, F.S.A., F.R.G.S., with orientation and mensuration of the temples by Mr. R. M. W. SWAN (London: Longmans, Green, and Co. 1892).

† *Petermann's Mitteilungen 1892* and *The Royal Geographical Society's Journal* for July, 1893, and April, 1899.

strengthened, especially as it is admitted by archæologists that the period during which many of the ruins are believed to have been erected covers, both previously and subsequently, that period during which scriptural references are made to the gold of Ophir.

The undoubted fact of many millions of pounds sterling present value of gold having been extracted by the ancients from these territories—some accredited authorities placing the value, on a conservative estimate of portions of the gold-bearing districts only, at over £75,000,000—during the same period, which covers the period during which biblical references are made to the gold of Ophir, and the admission by authorities that no part of the then known world, India included, yields such overwhelming evidences of extensive, continuous, and successful ancient gold-mining operations having been carried on as are found on every hand in Rhodesia, leaves much substantial argument to be disposed of by the opponents of the theory.

The authors, in Chapter iii., have contented themselves with merely stating the views of the various writers on the Rhodesia-Ophir theory, without expressing any definite opinions concerning it. For this reason, Professor A. H. Keane, F.R.G.S., late Vice-President of the Anthropological Institute of Great Britain and Ireland, "in a series of four scholarly articles on 'The Gold of Ophir: Whence Brought and by Whom?'* has given a new impetus and a new orientation to a perennial controversy. No one can ever say that the final word has been spoken in any discussion, and Professor Keane would certainly not claim finality for his judgment in a matter where we may hope shortly to have so much additional evidence at our disposal. But he has rendered service which the scholar and the practical man of affairs will alike recognise in boldly proclaiming that if

* Published in *Rhodesia*, August and September, 1901, 13, Devonshire Street, E.C., and issued in book form by Stanford, 1901.

Southern Rhodesia be not indeed the land of Ophir, it is yet the land from which Ophir drew its precious treasures."*

Professor Keane, in the course of courteous correspondence with the authors of this work, has most generously given them permission to reproduce his conclusions, the arguments in support of which, Professor Keane informs them, will shortly appear in a more elaborated form in a work to be published on an early date, and adds, "The two books—the volume prepared by yourselves and my monograph—should thus be complementary of each other. Between us I hope we shall succeed in settling this question in all its bearings once for all."

Professor Keane, in summing up his arguments, states:

"We thus arrive at the following important conclusions, which I trust may now be considered fairly well established, and may therefore legitimately take the place of the many theories and speculations hitherto current regarding the 'gold of Ophir,' its source and forwarders.

1. Ophir was not the source, but the distributor of the gold and the other costly merchandise brought from abroad to the Courts of David and Solomon.

2. Ophir was the emporium on the south coast of Arabia which has been identified with the Moscha or Portus Nobilis of the Greek and Roman geographers.

3. Havilah was the auriferous land whence came the 'gold of Ophir,' and Havilah is here identified with Rhodesia, the mineralised region between the Lower Zambesi and the Limpopo—Mashona, Matabili, and Manica lands.

4. The ancient gold-workings of this region were first opened and the associated monuments erected by the South Arabian Himyarites, who were followed, not before the time of Solomon, by the Phœnicians, and these very much later by the Moslem Arabs and Christian Portuguese.

5. Tharshish was the outlet for the precious metals and

* Leading article, *Morning Post*, see Appendix, Note L.

precious stones of Havilah, and stood probably on the site of the present Sofala.

6. The Himyaritic and Phœnician treasure-seekers reached Havilah through Madagascar, where they had settlements and maintained protracted commercial and social intercourse with the Malagasy natives. With them were associated the Jews, by whom the fleets of Hiram and Solomon were partly manned.

7. The Queen of Sheba came by the land route, and not from over the seas, to the Court of Solomon. Her kingdom was Yemen, the Arabia Felix of the ancients, the capital of which was Maraiaba Bahramalakum. Her treasures were partly imported (the precious metals and precious stones) from Havilah and its port of Tharshish to Ophir, and partly (frankincense and myrrh) shipped at Ophir from the neighbouring district of Mount Sephar.

8. Sephar was confused by the Alexandrian authors of the Septuagint with Ophir, which was the chief emporium of the Sabæan Empire.

9. In a word, the 'gold of Ophir' came from Havilah (Rhodesia), and was worked and brought thence first by the Himyarites (Sabæans and Minæans), later by the Phœnicians, the chief ports engaged in the traffic being Ezion-geber in the Red Sea, Tharshish in Havilah, and, midway between these two, Ophir in South Arabia.

10. This central position of Ophir explains how it became the intermediate emporium whither the fleets of Hiram and Solomon sailed every three years from Ezion-geber for the gold imported from Havilah and for the spices grown on the slopes of the neighbouring Mount Sephar, not far from the deep inlet of Moscha, round which are thickly strewn the ruins of Ophir.

11. These and the other Himyaritic ruins of Yemen show striking analogies with those of Rhodesia, while the numerous objects of Semitic worship and the fragments of

the Himyaritic script found at Zimbabye and elsewhere south of the Zambesi leave no reasonable doubt that the old gold-workings and associated monuments of this region are to be ascribed to the ancient Sabæans of South Arabia and their Phœnician successors."

In one point only, however, have the authors formulated a theory, but this does not relate directly to the inquiry as to the original builders. This has reference to the question of "periods" as dealt with in Chapter xii.—a theory which appears, from a consideration of the plan and construction of almost two hundred ancient ruins in Rhodesia, to naturally unfold itself. This is no novel theory, but amounts to a concretion of the opinions of several authoritative writers on this question—opinions borne out by the results of five years' exploration work among the ruins.

Still, until the arguments advanced in Chapter xii. have been carefully considered by the reader, or until the references and opinions given in the works of previous writers on this subject have been weighed, it might be well that the reader should treat these "periods" as "classes" of ruins only, without reference to the suggested periods of time and their sequence.

Mr. W. G. Neal, of Messrs. Neal and Johnson, has for five years been engaged in examining and exploring the ancient ruins in several parts of Rhodesia, and his investigations have been carried on in the light of discoveries made by all the archæologists who have visited this country to inquire into the question of the ancient ruins. His investigations cover a very large number of ruins of major importance which had not previously been examined, many of which he and Mr. Johnson were the first to discover and locate. The fund of information gained in these prolonged researches is both voluminous and important, overwhelmingly confirming from altogether new sources many of the opinions advanced by Mr. Theodore Bent, Dr. Schlichter, Sir John

Willoughby, Messrs. Maund, Phillips, Rider Haggard, and other writers, and brings to light very many fresh facts which must be weighed by archæologists in dealing with the question of the original builders of the ruins.

To this mass of new information are added, by permission, the records of investigations by many leading Rhodesians who have long devoted considerable time to the study of this fascinating subject, while Mr. R. N. Hall supplies descriptions of several ruins of various types of construction which he himself has carefully examined. He has also collated and arranged the information supplied by Mr. Neal and other local explorers of the ruins, and the historical portion of the work is from his pen.

There is still a large field open for further explorations, as not a single ruin, notwithstanding months of continuous work within its walls, can be said to have been exhaustively examined, while many ruins are altogether unexplored and others are constantly being discovered.

Palgrave wrote the following after making his researches among the ancient ruins of Arabia: "We must give it up, that speechless past; whether fact or chronology, doctrine or mythology; whether in Europe, Asia, Africa, or America; at Thebes or Palenque, on Lycian shore or Salisbury Plain; lost is lost; gone is gone for ever."

But so long as any of the ancient ruins in Rhodesia remain unexplored, so long the words of Palgrave cannot apply to the enigma which these ruins now present, and the possibility, and even probability, of reconstructing the story of their past is by no means remote. During the last few years some of the mystery of the ruins has been translated into definite fact, but the ruins and relics have yet much to reveal to the archæologist and antiquarian.

The authors consider their efforts in the preparation of this volume will have been amply rewarded if the book serves to widen and deepen interest in this most fascinating subject.

BULAWAYO, RHODESIA.

THE Authors' acknowledgments are due to the following:

Sir John Willoughby, for permission to reproduce from *Further Excavations at Zimbabwe* plans of the Zimbabwe ruins and any portions of the text.

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ANCIENT RUINS

DEALT WITH IN THIS WORK

Great Zimbabwe.
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Umnukwana Ruins.
Little Umnukwana Ruins.
Gombo's No. 1 Ruins.
Gombo's No. 2 Ruins.
Three unnamed Ruins in M'Pateni district.
Mundie Ruins.
Nuanetsi Ruins.
Little Nuanetsi Ruins.
Essengwe Ruins.
Little Essengwe Ruins.
Escepwe Ruins.
Little Escepwe Ruins.
Two unnamed Ruins in East Belingwe district.
Wheel of Fortune Ruins.
Bala-bala Ruins.
Two unnamed Ruins in East Filabusi district.
Dhlo-dhlo Ruins.
N'Natali Ruins.
Tuli Ruins.
Lumeni Ruins.
Golulu Ruins.
Little Golulu Ruins.
Thabas Imamba or Mombo Ruins.
Thabas I'hau Ruins.
Bembezwaan Ruins.
Jombi Ruins.
Check Ruins.
Watoba Ruins.
Isiknombo Ruins.
Molindula Ruins.
Burangwe Ruins.
Ihurzi Ruins.
Sesinga Ruins.
Bochwa Ruins.
Little Bochwa Ruins.
M'Popoti Ruins.
Little M'Popoti Ruins.
M'Wele Ruins.
M'Wele Tributary Ruins.
Wedza or Baden-Powell Ruins.
Evans' Store Ruins.
Defiance Ruins.
Ingangase Ruins.
Impanka Ruins.
Choko Ruins.
Mudnezero Ruins.
Chum Ruins.
Meewee Ruins.
Ensindi Ruins.
M'Telegwa Ruins.
Copper Ruins.
Umvunga Ruins.
Little Umvunga Ruins.
Little M'Telegwa Ruins.
Sebakwe-Umnyati Ruins.
Tagati Ruins.
Tati Ruins.
Selkirk Ruins.
Semalali Ruins.
Macloutsie Ruins

Macloutsie-Lotia-Kana Ruins.
Lotsani-Limpopo Ruins.
Pongo Ruins.
Dawney Ruins.
Daka Ruins.
Wankie Ruins.
Lower Shanghani Ruins.
North Matoppa Ruins.
Lower Khami Ruins.
Umsimbetze Ruins.
Kulukulu Ruins.
M'Badzulu Ruins.
Gatling Hill Ruins.
Gwadalowayo Ruins.
Shebona Ruins.
Lobela Ruins.
M'Tendele or Matindella Ruins.
Umnyati Ruins.
Lundi Ruins.
Lower Lundi Ruins.
Seven distinct Ruins on Umzingwani.
Sovereign No. 1 Ruins.
Sovereign No. 2 Ruins.
Inyota Ruins.
Chain of seven Ruins (Mazoe).
Bambarari Ruins.
Mount Fura Ruins.
Inyanga Ruins.
Umtelekwe Ruins.
Impakwe Ruins.
Shashi Ruins.
Lipokoli Ruins.
Baobab Kop Ruins.
Mullens' Ruins.
Bili Ruins.
Morven Ruins.
Panda-ma-tenka Ruins.
Bulalema Ruins.
Fig-tree Ruins.
Umvutcha Ruins.
Tulika Ruins.
Umrongwe Ruins.
Masunda Ruins.
Chugwa Ruins.
Sinanombi Ruins.
Regina Ruins.
Dechow Ruins.
Zeeri River Ruins.
Chilonga Ruins.
Metema Ruins.
Mabetsa Ruins.
Little Zimbabwe Ruins.
Melsetter Ruins.
Umtelekwe (Sabi) Ruins.
Posti Ruins.
Yellow Jacket Ruins.
Chipadzi Ruins.
Wainzi Ruins.
Onave Ruins.
Stone Door Ruins.
Makombi Ruins.
Ancient Aqueduct Area and numerous unnamed Ruins.
Zimbabwe Ruins in Portuguese territory.
Vukwe Ruins.
Warnford Ruins.
Irene Ruins.
Makukukupene Ruins.
Koodoo-Marvel Ruins.
Mabookiwaneni Ruins.
Linchwe le Komo Ruins.
Zabma Hill Ruins.
Monarch Ruins.
Semokwe Ruins.
Three-Mile Spruit Ruins.
"World's View" Ruin.
Iron Kopje Ruins.
Impakwe Ruins.
Fort Tuli Ruins.
Ipagi Ruins.
Eighteen unnamed Ruins in Salisbury district.

CHRONOLOGICAL TABLE OF EVENTS ANCIENT, MEDIÆVAL, AND MODERN

REFERRED TO IN THIS WORK

B.C.

4266–378. Egyptian Régime (Brugsch). For 2500 years the Kingdoms of Yemen (South Arabia), Himyarites (Minæans and Sabæans), held supremacy in trade, enterprise, wealth, and influence (Wilmot).

3000 (circa). Phœnicians emigrated from Persian Gulf to the coast of Eastern Mediterranean between Syria and Palestine (Rawlinson).

2000–1100. The orientation of several Zimbabwe temple buildings in Rhodesia as fixed by Messrs. Bent and Swan and Dr. Schlichter shows that these buildings were standing not later than 1100 B.C., while several are believed to be of far anterior date, the orientation of at least two ruins showing ages 2000 B.C.

1700. Monuments of Punt depicted ostrich feathers, leopard skins, giraffes, lions, cynocephalous apes, elephants, and ingots of gold—all products of South-East Africa.

1400–400. Phœnician kingdoms flourished (Rawlinson).

1200. Carrying trade of the world, especially that of the countries of the Indian Ocean, in the hands of the Phœnicians (Rawlinson. Wilmot).

1130. Phœnicians believed to have colonised Spain at this date (Wilmot).

1100. South Arabian monopoly of maritime trade with South-East Africa and all countries of the Indian Ocean appears to have waned.

1100–1000. Commercial alliance between Kings David and Solomon and Phœnicians; Hiram's voyage for King Solomon's gold; Phœnicians build and furnish King Solomon's Temple; King Solomon worships in Phœnician temple at Sidon (Books of Kings and Chronicles and secular history quoted by Rawlinson).

700 (circa). Phœnicians most probably mined at the Scilly Islands and Cornwall at this time (Rawlinson).

700. From before this date the trade of the west coast of Africa had been relinquished by the Phœnicians to the Carthaginians, though the northern trade with Gaul, Scilly, and Cornwall was retained (Rawlinson).

620. Circumnavigation of Africa by the Phœnicians.

600–164. Period during which scriptural allusions are made to "Ophir" (Schlichter).

332. Phœnician city of Tyre ceased to be of any importance when it was conquered by Alexander of Macedon. Ezekiel's prophecies with regard to Tyre fulfilled (Rawlinson).

200. The Romans penetrated from the north through the heart of Africa to a nation called the Agizymba, south of the Equator (Ptolemy). De Barros believed Agizymba to be identical with Gazembe, a country north of Tete, on the Zambesi.

A.D.

1–600. Dr. Schlichter shows that during this period there was no intercourse between the natives of South-East Africa and Southern Arabia. Mr. Bent also draws attention to the gap in Arabian and South-East African history at this period.

50–100 (circa). Kharabit, the Sabæan king, possessed the coast of Africa to an indefinite extent (Periplus).

138. Date of coin (Antoninus Pius) wrongly stated to have been found in an ancient working near Umtali, in Rhodesia.

400–500. Arab traditions of violent earthquake in South-East Africa (Wilmot).

900 (circa). Arab writer Abu-Zeid-Hassan describes the Land of Zenj (north of Sofala) and the coast of Sofala.

903. Arabs known to be settled at Sofala (Wilmot).

940. Massudi mentions Zenj and Sofala.

1000 (circa). Arab writer Al-Birúni describes the commerce of Sofala.

1150 (circa). Edrisi, Arabian geographer, describes Sofala as "a country of gold," and mentions that gold in abundance was exported.

1250. Ibn Sayd also describes Sofala as a country of gold.

1403. El Bakoni and Abd-el-Rassai mention the trade of Sofala.

1403. First mention of the vine in South-East Africa, which Abd-er-Rashid reported as flourishing extensively.

1480. Covilham visited Sofala and heard of the gold mines.

1487. Discovery of the Cape of Good Hope by Diaz.

1497. Doubling of the African continent by Vasco da Gama, who anchored at Sofala.

1505. Portuguese expedition takes possession of Sofala, which becomes tributary to Portugal.

1505. Two Arab dhows laden with gold from interior found at Sofala.

1514. Duarte Barbosa wrote as to Sofala and Monomotapa and describes the gold mines.

1552. De Barros mentions Zimbabwe.

1560–1750. Portuguese Jesuit Missions flourished in Monomotapa.

1561. Murder of the proto-martyr of Monomotapa — Father Silveira.

1570. Father J. Santos described the south-east coast of Africa and Monomotapa.

1572 (July). Portuguese expedition started inland for Monomotapa to avenge the murder of Father Silveira, but disease and death prevented more than a temporary success.

1588. Livio Sanuto described Monomotapa.

1590 (circa). Hordes of Gazembe from northern Zambesia ravage Monomotapa and Sofala.

1591. Position of Portuguese on south-east coast precarious (Captains Lancaster and Guillain).

1591. The Moumbos (Mombos) were at this time not vassals of the King of Monomotapa, but assisted Portuguese against him (Diego de Conto).

1591. First visit of English ships to Table Bay.

1600 (circa). Huet's work on Ophir.

1600 (circa). Zulu (Amaswazi) invasion of Monomotapa. Mombo "wiped out."

1602. Dos Santos described Sofala, the gold mines of Monomotapa, and the gold export trade.

1603. Johnstone described Monomotapa.

1607. The King of Monomotapa donates all mines to the Portuguese in consideration of armed alliance.

1630. Portuguese missionaries report as to state of Christian churches (twenty-two ecclesiastical districts) in Monomotapa.

1632. Tete founded by Portuguese.

1652. Commencement of the Dutch settlement in Cape Colony (Theal).

1670. Ogilby's *African Geography* published.

1685. Discovery of the copper mines of Namaqualand (Theal).

1693. Portuguese forces, being defeated by natives, retire from Zimbaoe.

1705. French map of South Africa published showing "Etats du Monomotapa."

1720. Several tribes of Makalangas, forced down south by Zulus, entered and settled in Natal.

1831–32. Monteiro and Gamitto explore Gazembe, north of the Zambesi.

1837. Matebele cross to the north of the Limpopo.

1855. Livingstone discovered the Victoria Falls on the Zambesi.

1868. Adam Renders rediscovered the Great Zimbabwe.

1871. Mauch and Baines explore the Great Zimbabwe.

1875 (May 8th). Mr. Thomas Baines, F.R.G.S., died.

1888. Lord Salisbury proclaims Mashonaland to be within the sphere of British influence.

1889. Messrs. W. and H. Posselt discovered the soapstone cylinder at Zimbabwe.

1889. The Charter to the British South Africa Company granted.

1890. Pioneer column entered Southern Rhodesia.

1890 (November 24th). Mr. E. A. Maund read paper on Zimbabwe before the Royal Geographical Society.

1891 (June and July). Messrs. Bent and Swan explore the Zimbabwe ruins.

1892 (November and December). Sir John Willoughby made further explorations at Zimbabwe.

1893 (July). *Geographical Journal* contains article by Dr. Schlichter on "The Commercial Relations between the Sabæans and South-East Africa."

1895–1901. Messrs. Neal and Johnson engaged in exploring ancient ruins south of the Zambesi.

1899 (February 27th). Dr. Schlichter read a paper on "The Ancient Ruins of Rhodesia" before a meeting of the Royal Geographical Society.

1899. Dr. Carl Peters discovered the ancient ruins in Mount Fura district.

ADDENDA TO SECOND EDITION

ANCIENT RUINS (ADDITIONAL)

Vukwe Ruins, near Vukwe River, in Tati Concessions. Ancient gold-working very numerous in this locality.

Monarch Ruins. On hills in Tati Concessions, three or four miles from Monarch Mine.

Warnford Ruins. On the property of Warnford Exploration Co., Tati Concessions, two miles from Monarch Mine.

[The authors have arranged for full descriptions and photographs of the above three ruins to be obtained.]

Semokwe Ruins, on the Semokwe River, Mangwe district. Description obtained.

Irene Ruins. On kopje on which is the south-east beacon of Irene Farm.

Three-Mile Spruit Ruins, near Bulawayo, on Salisbury Road.

"*World's View*" *Ruin.* Half-way between Mr. Rhodes' Huts at Westacre and World's View, Matoppa Hills.

Makukukupene Ruins. Terraced ruins on kopjes W.S.W. of Essexvale.

Koodoo-Marvel Ruins. In Filabusi district, near native path from Koodoo Mine to Marvel Mine. Terraced system of building.

Mabookiwaneni Ruins. Several distinct sets of Zimbabwe-built walls.

Iron Kopje Ruins. Mr. Duncan M'Intosh, of Rothesay, Scotland, describes an ancient ruin which he saw in 1868 at Iron Kopje, Tati district. It was situated on the level top of the hill, and comprised a circular wall, eight feet high and five feet broad at base, having one opening or gateway. A line of herring-bone pattern runs at about two feet from the ground. This ruin has been recently visited, and descriptions show that it is in a very good state of preservation.

Impakwe Ruins. This ruin is somewhat smaller than Iron Kopje Ruins. It is situated on a high mound near the Impakwe River, on the left-hand side (going north) of the old pioneers' road north. The summit of the mound is surrounded by a very well finished dry-masonry wall. The stones are carefully cut and dressed.

Linchwe le Komo Ruins. On a flat-topped hill bearing this name, about one mile south of a point three miles east of Semalali Ruins. There are very extensive views from the summit. Mr. Swan stated this is the largest Zimbabwe Temple he had seen, excepting the Great Zimbabwe. Good workmanship, though building material poor. Courses regular. Rounded entrance facing north-east, the east side of which has a large buttress. Rounded inner entrance, with buttress on the south side of main wall. Height of outer wall from five to eight feet. Fine pottery, also pottery whorls, all made of well-ground material.

Fort Tuli Ruins. These ruins must not be confused with Tuli Ruins described on p. 303. Fort Tuli Ruins are situated on the left bank of the Shashi River, one mile north of Fort Tuli. Mr. Swan considered a portion of this ruin to be undoubtedly ancient, with obviously Kaffir additions. The ruin is built on a circular curve with a radius of fifty-four feet. A doorway seems to have been placed between the centre of this curve and the sun rising at the southern solstice.

Ipagi Ruins, on the Ipagi River, Tuli district. Distinct sets of ruins, believed by Mr. Swan to have been several Zimbabwe temples, but the original plans have been confused by re-builders. In this district are several ruined walls, some of which can be safely attributed to ancients and others to mediæval Kaffirs.

Zabna Hill Ruins. Four distinct sets of ruins situated on and near Zabna Hill. One comprises two curved lines of wall with apparently an entrance between them. Believed to be true Zimbabwe buildings.

ADDITIONAL RUINS IN MASHONALAND

(*a*) A circular ruin E.N.E. of Salisbury, on true lines of curves, about the same as the Lundi Ruins.

[The description of this ruin has been lost, but particulars of its exact location and description are being obtained for the authors.]

(*b*) Several ancient stone walls, averaging three feet in height, three miles north of Mount Hampden. Kaffir kraal built on site.

(*c*) Five distinct ancient ruins on some small hills east and north of Mount Hampden, about a mile from the left bank of the Gwiwi River, on the road to Mazoe River. The radii of curves are, says Mr. Swan, similar to the Zimbabwe system of measurement.

(*d*) Ten distinct ruins on the ridge which forms the crown of the watershed between Salisbury and the Gwiwi River. These measure on Zimbabwe system. Several showed evidences of solstitial orientation, and some did not (Swan).

(*e*) Several distinct ruins near Jesuit Station, near Salisbury. Three corresponded in measurements to other work of the Zimbabwe people (Swan).

(*f*) Ancient ruins half-way between Hartley Hills and Salisbury.

[Several gentlemen interested in the examination of ancient ruins have kindly promised to secure descriptions and photographs of the above-mentioned ruins (*a*)–(*f*), and these will be included in a future edition of this work.]

ADDITIONAL NOTES WITH REGARD TO RUINS DESCRIBED IN THE FIRST EDITION OF THIS WORK

Khami No. 12 Ruin (p. 224). This ruin is situated about three hundred yards north of Neal's Drift on the right bank of the river, and within twenty yards from the river-bed.

Period. It is impossible to state what period this ruin represents, as it has not at present been fully examined. Unlike the other ruins at Khami, this building is constructed of large unhewn stones of all shapes and sizes, there being no courses in the walls. It resembles in some peculiarities the older Makalanga stone buildings, but it is considered far too superior to any building erected by them. It is elliptical in plan, and the entrances are rudely rounded. Possibly it is a building of the later ancients, and not being for residential purpose, was roughly constructed. This conjecture would appear to be borne out by a parallelism noticed in the Inyanga district, where the "Valley Ruins," or residential buildings, are well built, while the "Slave-pits" and the "Hill Terraces" are roughly though substantially constructed. The authors are engaged in comparing photographs of these walls with Makalanga buildings in different parts of the country.

Ornamentation. None.

Description. The main wall faces W.S.W., and the highest portion still standing is about eleven feet from the outside level of the ground. The walls appear to be four feet wide at base and three feet wide on the summit. The stones are unhewn, and the centre of the walls is filled in with granite splinters. The whole building stands upon a granite glacis. There are three if not four inclosures. The divisional walls are three feet wide, and the ruin has been filled in, probably by later occupiers, to within four feet of the present tops of the walls. The dimensions of the ruin, outside measurements, are twenty-eight yards from north to south and twenty-three yards from east to west.

Note. A large quantity of wild fig, plum, and nut trees are growing close to the ruin.

Semalali Ruins (p. 327). Walls have rounded entrance.

Shashi Ruins (p. 328). On a granite hill near the right bank of the Shashi River, just above its confluence with the Semokwe River.

Macloutsie Ruins (p. 328). These ruins stand on a little knoll of diorite, and consist of two curves and an entrance with rounded walls. The courses are not very regular, owing to absence of granite.

Lipokoli Ruins (p. 328). Dentelle pattern present. Exceedingly well constructed. Walls built round hills. One wall which covers a little ravine must have been fifteen feet high, and was ten feet wide at base.

Lotsani-Limpopo Ruins (p. 329). On the left bank of the Lotsani River, at its confluence with the Limpopo, on two little knolls of diorite two hundred yards apart. The present height of the walls is from six feet six inches to seven feet.

Lundi Ruins (p. 340). The entrance walls are slightly rounded, and *not squared.* The buttress or bulging out on the north-east wall has a radius of eight feet six inches. It is carefully constructed, and is bounded at its extremity by vertical lines in the masonry.

Umzingwani Chain of Ruins (p. 342). "These," says Mr. Swan, "bear indubitable evidence of the Zimbabwe people's handiwork. Many are rebuildings of older structures . . . the walls of older buildings have been made to form part of Kaffir strongholds." This chain runs from west to east, the majority of the ruins being on the north bank of the river.

FURTHER NOTES TO SECOND EDITION

Victoria Falls, Zambesi (p. 1). Dr. Livingstone (1855) gave the actual height of the Falls as "about 360 feet from the top of the precipice to the surface of the water in the abyss." Chapman (1862) relates that the sound of the falling water was heard by him "at a distance of fifteen miles on an elevated region of the south." The following explorers visited the Falls: David Livingstone, 1855 and 1865; Baines and Chapman, July and August, 1862; Dr. Ed. Mohr, June, 1870; F. Oates, January, 1875; Dr. Holub, January, 1875; F. C. Selous (twice), June and October, 1877; Rev. F. Coillard, August, 1878; Major Serpa Pinto, November, 1878; Major Gibbons, 1895, 1898. All of these give sketches and information as to the Falls in their respective works.

Makalanga (p. 3). Several writers, including Sir John Willoughby, Dr. Schlichter, and Messrs. Selous and Baines, call the Makalangas by the name of Makalakas, and many recent writers on Rhodesia, who do not pretend to be authorities on this particular matter, follow their example in writing of these people. It would seem that *Amakalanga* is the correct name, though the people themselves are in many districts thoroughly conversant with the name Makalaka. Mr. Herbert J. Taylor, the Chief Native Commissioner of Matabeleland, states that Makalaka is merely the Sechuana name for these people, as the natives of Bechuanaland still speak of the Makalangas as Makalakas. Possibly this latter name was bestowed upon them by the Zulu hordes from the south, who conquered and made slaves of the Makalangas, in the same way as they called them *M'Holi* = slaves, and *Amaswina* = dogs. The greatest number of admitted authorities agree in stating that the correct name of these people is *Amakalanga*, or "People of the sun." De Barros (1552), Dos Santos (1570), Livio Sanuto (1581), give the name in Portuguese fashion as "Mocarangas." Dr. Theal states that evidently "the early Portuguese in rendering native names were unaware of the construction of the Abantu language."

This fact is obvious in many instances. Elsewhere in his works Dr. Theal states: "The Portuguese were not very careful in the orthography of Bantu names." In writing the name Makalanga, the Portuguese being a Latin nation would naturally follow a rule common to all Latin nations, particularly the French, and would transpose *l* for *r*. Professor Keane, in his *Handbook of the History of the English Language*, gives instances of this practice, and cites *apôtre* (apostle), *epitre* (epistle), and states that this practice is also observed in Indian languages, where *Angrēzi* is used for *Anglesi*. Father Torrend, in his work on the Bantu languages, also the late Rev. T. M. Thomas, Dr. Theal, Messrs. Bent, Swan, and the Revs. D. Carnegie and Cullen Reid, state that the proper name is Amakalanga.* Many authorities have always contended that the correct title of Mashonaland is Amakalangaland. Mr. Bent, writing on the Portuguese rendering of Mocangas, says: "Every one knows the Portuguese custom of substituting *r* for *l*. Umtali is called by them Umtare, and blanco branco; hence with this little Portuguese variant the names are identical. Father Torrend too, in his recent work on the Abantu languages, speaks of the Karanga branch as spoken by the people of Monomatapa and their descendants. Though I fear the name Mashonaland has got too firm a hold over the British mind ever to be altered, and to this I have bowed myself reluctantly in this paper, nevertheless I am convinced that Makalangaland is the correct designation for the country, and it is a very picturesque name too, being derived from the Abantu word *Langa*, the sun, *Ka*, of, and *Ma* or *Ba*, the people of, and means 'the people of the sun.'"

Makalanga Stone Builders (p. 17). A picture of Makalanga stone-building is given on p. 176 *Matabeleland* (F. Oates).

Abolosi Forts (p. 17). Good specimens of these Kaffir stone ramparts may be seen on the Matsjemsloppe Kopjes, near Bulawayo, on the Makukukupene Flats, and also west of Woollendale Farm, on the right side of road leading to the Lady Midas property.

* Mr. W. Thomas, Native Commissioner, states that these people always called themselves Makalangas before the arrival of the Matabele in the country.

Himyarites (p. 21). "Glasers' discoveries of Himyaritic inscriptions (over a thousand) make it quite clear that in very remote times, coeval with, if not earlier than, Babylonia and Egypt themselves, South Arabia, the Arabia of the children of Joktan, was a land of culture and literature, a seat of powerful kingdoms and wealthy commerce, which cannot fail to have exercised an influence on the general history of the world. Professor Sayce declares his present belief to be that the Phœnician alphabet, mother of all our European systems, came from Arabia."—*The Gold of Ophir* (p. 121).

Suggested occupation of Rhodesia by South Arabians. An important parallelism in Terrace Architecture. Professor Keane points out the most striking similarity of the terrace ruins in Inyanga, Rhodesia, to the terrace ruins in South Arabia. He states :—

"If, after a careful study of *The Ancient Ruins of Rhodesia* and *The Gold of Ophir*, any lingering doubts should remain regarding the Himyaritic origin of the South African ruins, they will probably be dispelled by a consideration of the character and prodigious development of the ancient terrace-works on the slopes of Mount Fura and Inyanga uplands in North Mashonaland. Nothing comparable to this arduous agricultural system is elsewhere found, except in the Peru of the Incas, which is beside the question, and in the Sabæan and Minæan highlands of Arabia Felix (Yemen), where the corresponding works, although the parallelism has hitherto passed unnoticed, are not merely analogous, but absolutely identical, both in their general aspect and enormous extent. So true is this that the descriptions given by independent observers of the terraced slopes in both regions might almost change places, as may be seen by comparing the two subjoined accounts :—

"TERRACED SLOPES
(Yemen).

"'In one district the whole mountain-side, for a height of six hundred feet, was terraced from top to bottom. Everywhere, above, below, and all around, endless flights of terraced walls

"TERRACED SLOPES
(Inyanga, Rhodesia).

"'The extent of these ancient terraces is simply astonishing, and there is every evidence of hundreds of thousands of inhabitants. It would be quite impossible to convey any ade-

meet the eye. One can hardly realise the enormous amount of labour, toil, and perseverance which these represent. The terraced walls are usually from four to five feet in height, but towards the top they are sometimes as much as fifteen or eighteen feet. They are built entirely of rough stone laid without mortar. I reckoned on an average that each wall retains a terrace not more than twice its own height in width, and I do not think I saw a single breach in one of them unrepaired.'—General E. T. Haig, *Proceedings Royal Geographical Society*, 1887, p. 482."

quate idea of the immensity of labour implied in the enormous number of these ancient terraces. I saw at least one hundred and fifty square miles composed of kopjes from one hundred to four hundred feet in height literally strewn with the ruins. A contemplation of the enormous tonnage of stones and earth rudely built into these terraces really left me amazed. Goodness only knows how many thousands of these terraces I did not see. It appeared to be abundantly clear that the terraces were for the purpose of cultivating corn or cereals of some sort. The terraces, as a rule, rise up in vertical lifts of about two or three feet, and extend backwards over a distance of mostly about seven to twelve feet. The terraces are all made very flat and of dry masonry, not of hewn stone. On many of the kopjes, commencing at the base, there are, I judge, a hundred terraces before you get to the top' (Telford Edwards, quoted in *The Ancient Ruins of Rhodesia*, p. 353 *sq.*)."

Periods of Occupation (p. 35). Professor Keane is strongly of opinion that the Himyaritic occupation of Rhodesia covered a far greater period of time than their Phœnician successors in this country. This opinion is borne out by historical data as supplied by sacred texts.

Phœnicians (p. 37). The theory which attributes some ruins of Zimbabwe to the Phœnicians can be supported by many sound arguments (*Spectator*).

Portuguese Missionaries (p. 40). In 1560 Jesuit missionaries arrived at South-East Africa, Father Gonçalvo de Silveira being the head of the party. This was the first mission party to South Africa (Theal). These missionaries organised congregations in many parts of Monomotapa. In 1610 the Jesuits were withdrawn from Kalanga country, owing to disputes with Dominican missionaries. Friars of the Dominican Order accompanied Barreto's expedition into Zambesia, and established missions (*id.*). They do not appear to have penetrated so far into Monomotapa as the Jesuit brethren had previously done. The relics, especially the seal belonging to a priest, which were found at Dhlo-dhlo, are stated by Roman Catholic authorities to have been those of a priest of the Jesuit Order.

Phœnicians and Hebrews (p. 42). "We can understand how readily alliances were contracted between the Jews and Phœnicians, who both belonged to the same sub-group, as well as between these two and the southern Himyarites, all being of the same stock, say, cousins once removed" (Professor Keane's *Gold of Ophir*, p. 110).

Matoppas (p. 51), corruption of *Amadobo*, irregular, uneven, disconnected (Rev. T. Morgan Thomas).

Ancient Gold-mining (p. 64, sub-section *b*). Mr. Duncan M'Intosh, visiting Matabeleland in 1868, speaking of the Tati district, says: "Wherever we turned, it was evident that the best surface leaders had been worked out; although of all the shafts, which were of various depths, only one was found sufficiently wide to admit of a man standing at work inside it. Yet, nevertheless, the gold had been tunnelled out in a thoroughly competent manner. One thing appeared clear, that fire had been the principal agent employed, for at the bottom of all the workings charcoal was found, but as to how applied was not altogether apparent. Of course, it is well known that when rock or stone of any sort is subjected to intense heat, then suddenly cooled, that it becomes brittle, and may be picked out in fragments. The quartz only had been extracted, leaving behind the shell, or hard casing, undisturbed. Stones were found hollowed out like mortars, wherein quartz may have been reduced to dust.

Ancient Workings (*additional*) (p. 76).

Ayrshire Gold Mine. The old workings on this property show that an immense amount of work must have been done by the ancients. In the Western Section the main old workings are 391 feet long, 43 feet wide, with an average depth of 30 feet, and in the Eastern Section they are 347 feet long; and 37 feet wide, thus giving a total length of 738 feet.

Archer Reef. Ancient workings.

Aram Reef (near Veracity Mine). Reef left by ancients, pans 14 dwts.

Bleak House Reef. Ancient workings.

Bulawayo Reef. Extensive ancient workings.

Chelan Reef. Old workings very considerable.

Columbine Reef. Old workings of considerable size.

Gypring Reef. Good run of old gold workings.

Guildford Reef. Ancient workings.

Lytton Reef. Some quartz from ancient dumps, panned 10–12 dwts.

Lon-lon Reef. Ancient copper workings.

Melba Reef. Average length of ancient workings 200–300 yards. Some quartz from ancient dumps panned over 1 oz.

Marcella Reef. Old workings 100 yards long. Reef left by ancients panned 15 dwts.

Manning Reef. Ancient workings.

Mahdi Reef. Extensive old workings.

Newman Reef. Large old workings of a circular form.

Onyx Reef. Three large ancient workings, one 240 feet in length. 7–11 dwts. of gold from quartz off ancient dumps. Two smaller ancient workings. Quartz from dumps panned over 4 dwts.

Owl Reef. Ancient workings.

Pendennis Reef. Old workings. Some samples from old dumps panned 16 dwts.

Sidney's Luck Reef. Ancient workings.

Sugar Loaf Reef. Ancient copper workings.

Thackeray Reef. Ancient workings.

Umcima Reef. Considerable old workings.

Venice Reef. Large line of old workings.

Isafuba Game (p. 79). This, Mr. Bent says, is a universal game among the Abyssinians. One of their boards is in the British Museum. They call the game *Gabattà*, and the wooden boards made by the better class contain eighteen holes, nine for each player. There are three balls, called *Chactma*, for each hole, and the game is played by an intricate system of passing; the holes they call *toukuls*, or huts, and they get very excited over it. It very closely resembles the game played by the natives in Mashonaland, and is generally found in one form or another in the countries where Arab influence has at one time or another been felt (Bent).

Mr. H. M. Stanley observed in villages on the extreme Upper Congo very low carved benches, with six legs cut out of the Rubiaceae, and used for playing this game. His drawing shows these benches to have eighteen shallow holes.

Ancients—a large population (p. 100). Since the publication of Mr. Bent's work Mr. Swan, on a subsequent visit to Rhodesia saw so very many fresh ruins that he was forced to the conclusion that the ancient population must have been a large one (*Anthro. Inst. Journal*, February, 1896).

Kaffir Burials (p. 108). The present Kaffir custom of burying the dead in a sitting posture—a practice employed in South-East Africa in mediæval times—has its parallel in the ancient methods of burial in other parts of the world, for instance, in the tumuli of the old Iberians, in Guernsey, among the ancient Peruvians, etc. This practice still prevails among the Andaman Islanders. From the most ancient times, in almost every country, it appears that the corpse was surrounded with objects familiar to it in life.

Orientation (p. 109). "It is impossible that the exact orientation of the ruins can be a pure coincidence, because the instances of exact orientation on strictly geometrical plan, and system of radii of curves, orientated arcs and doorways, are so overwhelmingly abundant in very numerous ruins in any part of Rhodesia, while we have from these ruins indubitable records of such ancient forms of worship as included in its cult, as a pervading and ever-present feature, the orientated building or temple" (Bent).

Assagai (p. 112). "This word, now commonly used by all Europeans in South Africa, has been adopted from the Portuguese, *zagaia*, which is from the Arab *khazegah* (Keane).

Cape Half-breeds (p. 113). All Cape colonial historians refer to the irregular alliances of Dutch farmers with the women of surrounding Hottentot tribes. In 1671 this evil was so rife that regulations were enforced concerning it, yet in 1678 we find it officially recorded that "the number of half-breeds were rapidly increasing." The term *Afrikander* was first applied to any person of European descent betraying a strain of native (specially Hottentot) blood.

Disappearance of Ancients (p. 114). "In all probability these people [the ancients] mixed their blood with that of the African natives, and lost their separate existence in course of time by the amalgamation becoming complete" (Theal).

Monomotapa—Suggested connection with the ancient gold workers (p. 121). "The Monomotapa Empire may have been the last phase of a domination which probably began at least 2000 B.C., but whether it was the survival of ancient activity in these territories it is at present difficult to say" (*Times*). Dr. Theal, however, states in *The Portuguese in South Africa*, p. 123: "The ancient gold-workers mixed their blood with the ancestors of the Makalanga people." Mr. Bent, as also Dr. Schlichter, Mr. F. C. Selous, are emphatic in tracing the connection, as also are many writers who have lived among the Makalangas and Mashonas for years. This connection may not be at all inconsistent with the belief of Professor Keane, who holds that the Bushman Hottentots were the slaves of the ancients who occupied Rhodesia, though Dr. Theal believes that the Abantu people, of whom the Makalangas and Mashonas formed part, passed to the south of the Zambesi several hundreds of years before the Christian Era, and that they did not cross to the south of the Limpopo till a much later date. Professor Keane contends that the Bantu peoples arrived from the north and settled in South-East Africa at least two thousand years ago. Dr. Theal also states: "Of the various Bantu tribes south of the Zambesi the Makalangas appeared to have a larger proportion of Asiatic blood in their veins than any of the others, which will account for their mental and mechanical superiority. Almost at first sight the Europeans observed that they were in every respect more intelligent than the blacker tribes along the Mozambique coast." Further, "The present Mashonas are descended from the Makalangas of the early Portuguese days, and preserve their old name and part of their old country."

"*Kafir* (*Kaffir*) (p. 121) is an Arabic word which means 'infidel'; and when the Portuguese reached the East Coast it was found to be in general use, as applied by the Mohammedans to all the surrounding pagan populations who rejected the precepts of the Koran." This title was adopted and similarly applied by the early Portuguese and Dutch settlers successively, and later by all Europeans (Theal).

Monomotapa (p. 122), "Lord of the Mines" was also the title of the lord of the state of Prester John (Abyssinia) (De Barros quoted in *Gold of Ophir*, p. 7).

Monomotapa, Notes on the (p. 122). Monomotapa is not the name of a country, though often so applied on maps and in recent writings. Monomotapæ Imperium is simply the empire of the Monomotapa (or paramount chief, king, etc.), which is a dynastic name.

"The residence of the Monomotapa [when the early Portuguese arrived] was" (says Dr. Theal) "close to Mount Fura, which he would never permit the Portuguese to ascend. . . . The Makalanga chief probably had his title of Monomotapa from his possession of Fura."

Makomba was the personal name of the Monomotapa when the early Portuguese first came in contact with the Makalangas. Shortly afterwards, the chief of the sub-tribe of Manica Tshikanga was created Monomotapa, and he was succeeded in this office by Kesarimyo (Diogo de Alcazova's Report, 1566, quoted by Dr. Theal).

"The Monomotapa at this time [1590], who bore the title of Mambo, was well disposed to the Portuguese" (Theal).

The form of oath used by the Makalangas at this time was *Ke Mambo* (Theal).

Kapranzine, the Monomotapa in 1629, was defeated by Manuza, who succeeded to the title. He gave permission to the friars to go anywhere in the country and build churches, and threw open the gold mines for their exploitation by the Portuguese. He was succeeded in 1643 by "Pedro."

Semitic Impressions on Natives (p. 126), additional to those mentioned pp. 127–34.

11. The worship of ancestors.

12. Despising the uncircumcised.

13. The practice of espousal before marriage.

14. Purification by water, and shaving of the head.

15. Transferring impurity or infection from individuals to some animal which is slain.

16. A brother (or if there be no brother, the next of kin) must take his brother's widow, as a wife, to raise up seed to his brother; the children thus born are legally viewed as the children of the deceased.

17. The reception by women of parties returning from hunting or war.

18. The feasts of New Moons.

19. The feasts of First Fruits.

20. Defilement by touching the dead or by contact with blood.

21. Places of refuge: certain tombs, an inclosure in the king's court, the queen's kraal. Once inside the inclosure of the official who acts as the "Appeaser of the King's Anger" the victim is saved (*Coillard*, pp. 220, 224, and 333).

Barotsi as Coppersmiths (p. 127). Rev. John Campbell, writing in 1822 of the Barotse nation, who were then occupying what is now known as the south-western portion of Southern Rhodesia, says: "The Marootse are confidently reported by other nations to smelt copper; they profess the same themselves, and they abound in copper articles more than the other nations."

Makalangas (mediæval) as Iron and Copper miners. "The iron [obtained by the Makalangas of Monomotapa] was regarded as of superior quality, so much so that a quantity was once sent by the Portuguese to India to make firelocks of" (Theal). Copper mined by the Makalangas was also exported by the early Portuguese (*id.*). The early Portuguese also obtained considerable quantities of copper from the lower districts of the Limpopo" (*id.*).

Makalangas and the King's Fire (p. 129, sec. 10). "Every year, at a certain stage of the crops, a command was sent throughout the country that when the next new moon appeared all the fires were to be put out, and they could only be lit again from the spreading of one kindled by the Monomotapa himself. This custom most likely had a foreign origin" (Theal). Several writers alluding to this custom believe it originated in the fire worship of the ancients.

Sacrifice of Black Oxen (p. 131). The Rev. T. M. Thomas (1872), of Inyati, Matabeleland, also states that on the accession of King Lo'Bengula a sacrifice of picked black oxen was offered by the king to the spirits of his predecessors. He addressed each by name, and prayed him, pointing to one of the oxen, saying, "This is thine, O ——." Afterwards the oxen were killed. The meat was exposed for a night, in order that during the darkness the spirits of those to whom it has been offered might come and sanctify it. Mr. Thomas further states that fifty black oxen were sacrificed on the burial of Umzilikasi to his spirit and to those of his father and grandfather. Also that in "sickness" an ox is offered to the proper shade thought to have effected the illness, and its gall is sprinkled over the afflicted one.

Double Iron Bells ("Find" No. 30, p. 143). These found in Southern Rhodesia are really double gongs, and not bells. They average sixteen and a half inches high, and are hammered together out of two thick sheets of soft iron. They have no clappers, and were, apparently, intended to be struck from without. These have frequently been found in Kazembe country, where the native states that these bells are not made now, and that they are very old (*Anthrop. Journal*, 1901, Article 39).

Dr. Holub (vol. ii. p. 147) gives an illustration of a double iron gong of crude make still in use among the Barotsi as a musical instrument.

Mr. H. M. Stanley states these double iron gongs were in use by the natives of Urangi (Upper Congo), and also at Mangala on the Congo.

Additional "Finds" (p. 143).

255. Mr. Swan found at Zimbabwe "a very small fragment of a red pigment, on which was a decoration of herring-bone kind in gilt; this was so extremely finely worked that to see all its details one had to use a magnifying glass. This work can only be done by people who had acquired great skill in goldsmith's work."

256. Fragments of soapstone in débris heaps, No. 1 Ruin, Khami.

257. Phallus, in Tati district.

258. Ditto Ditto

259. Small bar of gold, in Tati district.

260. Copper ingot Ditto

261. Jade stone, shaped (conjectured) for hand tool, near No. 1 Ruin, Khami.

"*Finds*" (No. 31, p. 143). The so-called "bronze" implements are really made of unalloyed copper. Tin and zinc are both extremely rare, if not altogether absent from the country, so that neither bronze nor brass could be produced locally.

"*Finds*" (p. 150). On the plate facing page 150. No. 2 is now believed to be an undoubted implement. No. 4 is ascertained to be a natural wind-worn stone. No. 6 is made of mica schist, and not soapstone. No. 8 is a pottery tablet.

Origin of Architecture—Discriminating between ruins built by Ancients and Mediæval Kaffirs (p. 160). A casual observer of the ruins might ask himself whether or not certain of the ruins were built by Kaffirs in mediæval times, especially as in some instances the ruins have some extension of obviously Kaffir building. In one or two instances the foundations of the ancient ruins are under the walls of Kaffir buildings, the Kaffirs having followed generally the lines of curves, but, as Mr. Swan says, the original plan can generally be recovered by removing the crude superstructure. Dr. Schlichter made similar remarks as to Dhlo-dhlo, and Mr. Bent as to M'Tendele. Old Kaffir peoples have, according to Messrs. Bent, Swan, Selous, Schlichter, Willoughby, and Neal, occupied some of the ruins as strongholds. Two successive Mombo chiefs did this at Thaba Imamba and Dhlo-dhlo respectively. Makalangas have also occupied Zimbabwe and a great many other ruins. They have in all such cases used the material provided by the ancients for building their poorer walls, some of which could only have been used as cattle pens.

The following points should be considered when discriminating between ancient ruins and such later buildings:—

(1) Whether the plan of the building shows geometrical construction, and admits of solsticial arcs and orientation.

(2) Position of doorways.

(3) Whether position and elevation of building command a view of the sun, either rising or setting, on a fairly distant horizon.

(4) The presence or absence of dentelle, chevron, and herring-bone patterns.

(5) The quality of the building as compared with that of any ascertained Zimbabwe structure.

(6) The nature of the "finds."

Architecture, Origin of (p. 160). "The ruins of Nakb el-Hajar in South Arabia are brought by Bent into relation with those of Rhodesia. . . . Some of those buildings which are known in Yemen, which seem to combine temple and fortress in one, as on Zimbabwe Hill, may have been built by the same race that constructed Zimbabwe; and the elliptical temples at Marib and Sirivah, and the one at Nakab el-Hajar, with its north and south doorways seeming to indicate an observation of the meridian, may embody some of the mathematical principles illustrated by the ruins of Mashonaland" (Professor Keane, *The Gold of Ophir*, p. 77).

Mr. Swan (*Anthro. Journal*, vol. xxvi.) writes: "The great Zimbabwe appeared to him to present a considerable resemblance in plan to Hagiar Kim in Malta, where Dr. Inman had found evidence of phallic and solar worship, but such similarity as there was must be due rather to a similarity of thought and civilisation than to a community of origin."

Areas of varying styles of Ancient Architecture (p. 164). Mr. Swan is of opinion that there is a marked difference in the form of the temples in Northern Mashonaland to those of Southern Mashonaland and Matabeleland. "The southern temples being built of one or more curves, but not forming a complete inclosure, whereas the northern temples are generally, if not always, complete inclosures, formed often of one curve. This would show a difference in cult" (*Anthrop. Ins. Journal*, February, 1896).

Building Material (p. 172, sec. 14). The term "diorite" is indiscriminately applied by prospectors and others to a variety of different works. The authors are informed by Mr. F. P. Mennell, F.G.S., Curator of the Rhodesia Museum, that the dark stone used by the ancients at Khami is dolerite, which forms dykes in the granite close by. The ruins reported as built on "diorite" are probably situated on the hornblendic schists of the Bulawayo series (in which the gold reefs occur), or on basaltic lava flows of the Tertiary period.

Position of Entrances (p. 176). Mr. Swan (*Anthrop. Journal*, vol. xxvi.), alluding to the northward position of openings and entrances of ruins, suggests this position might show a survival of the pole-star worship transplanted to the Southern Hemisphere (where it would be useless, like many other survivals) by a race going from the north.

Ornamentation (*additional*) p. 184. *Dentelle Pattern* has been found at the Lipokoli Ruins. Previously it was only found present at Zimbabwe and Mount Tendele. *Herring-bone Pattern* is to be found on the Iron Kopje Ruins.

Derivation of "Zimbabwe" (p. 191) (add to opinions already stated). "In the widespread Chinyanja language of Nyasaland, *mbuie* still means a prince, and *nyumbo*, a house." (Riddel's *Grammar of the Chinyanja Language*).

Derivation of "Zimbabwe" (p. 191) (additional suggestion offered by Mr. Alexander Dans, editor *Rhodesia*). "The word Zimbabwe could conceivably be traced to the word *simpi* or *zimbi*—metal —and *imba*—to dig (not a building, as Mr. Selous has it). *Imba-zimbi*—dig for metal (gold or iron, for the word is so used specifically as generally for metal)—could quite naturally be corrupted into 'Bazimbi' and then 'Zimbabi,' or 'Zimbabwe.' This derivation would seem particularly apt when one recalls the circumstance that Zimbabwe was the head centre of the ancient miners to which the outside settlements brought their ore to be refined and melted into ingots, and where subsequently other and later peoples have worked metals such as iron and copper. This suggestion we make as to the derivation of the word Zimbabye is strengthened by a French map of 1705, showing in these regions the country of 'Les Zim Muzimba, Peuples Anthrophages.' The phonetic difference between this 'Zim Muzimba' and the 'Imba-zimbi' (dig for metal) of our suggestion appears small."

Derivation of "Zimbabwe" (p. 191). "The word is pure Bantu, meaning a royal residence, from *nzimba*, a dwelling, and *mbuie*, a lord or great chief. The great chief here referred to was the Monomotapa or Benemotapa, a word which till lately was supposed to mean a kingdom or empire, but is now shown to be a personal title, with the appropriate meaning of 'lord of the mines' (literally 'diggings'), from *Mono* and *Bena* (*Mwana*, *Bwano*), lord, master, and *tapa*, to dig or excavate—all common Bantu words" (Professor Keane).

Herr Karl Mauch (p. 194). Herr Mauch, who was the first in modern times to describe the ruins of Great Zimbabwe, visited Mashonaland and Matabeleland in 1865, on the invitation of the hunter, Mr. H. Hartley, who asked him to accompany him

upon a trip to inspect the ancient gold workings of Tati and Inyati districts. At this time Herr Mauch was quite a young man and altogether unknown to fame (Baines). He also discovered the Tati Goldfields (Rev. T. Morgan Thomas). The memory of Karl Mauch is perpetuated in the name of the Mauchberg (8,725 ft.), the highest point in the Transvaal, which range forms the northerly culmination of the Drakenberg and Randberg Ranges. He was the first to detect the presence of gold in the exposed quartz reefs of the neighbouring Kaap and Barberton districts (Keane).

Kaffir Occupation of Zimbabwe (p. 206). In the Rev. F. Coillard's work is the following note (p. 528):—"The Rev. A. Merensky, writing in 1871, says: 'A guide of the Banyai tribe told us much about this mysterious spot [Zimbabwe] . . . and that a populous black tribe had formerly dwelt there, but about fifty years before had gone northward.'"

Francisco Barreto (p. 288), at the conclusion of his disastrous expedition into the Zambesi Valley to conquer the Monomotapa, died of distress of mind at Sena, on the Zambesi, and was buried at that place by the side of his son, but subsequently the remains of both were removed to Portugal (Theal).

THE ANCIENT RUINS OF RHODESIA

CHAPTER I

INTRODUCTORY

IN many senses can it be most truly said of Rhodesia that it is The Land of Romance. It is in Rhodesia that the heart of the great missionary explorer of Central Africa—David Livingstone—lies buried. In the awful solitude of Ilala, in Chitambo's Vale, near Lake Bangweolo, he breathed his last while on his bended knees praying for the regeneration of the dusky sons of Africa.

In 1855 Livingstone discovered the great Zambesian wonder—the Victoria Falls*—but exactly forty years to the month afterwards, these, the finest falls in sub-tropical Africa, were leased by the Chartered Company to a limited liability syndicate in order that their enormous water force might be utilised for supplying electrical power to the gold-mining industry of Rhodesia, while the shriek of the railway engine will in a comparatively few months' time startle the elephants, giraffes, zebras, and wild buck, and the hundreds of rhinos, hippopotami, and crocodiles that swarm in the valleys of the Zambesi; and coal, from what is said to be one of the largest known coal areas in the world, will be trucked from near the Falls down south to the Bulawayo market.

* *Victoria Falls.* Heights of perpendicular cliff, from 254 feet to 368 feet; width, over 5,300 feet.

Niagara Falls. Height of perpendicular cliff, 167 feet. Width of Horse-shoe Fall, 2,640 feet, and American Falls, 1,000 feet; total width, 3,640 feet.

Robert Moffat, trekking with ox-waggon from the Cape to the court of King Lo 'Bengula, some 1,360 miles, required many months for the tedious and highly dangerous journey. To-day one can lounge in a Pullman car *de luxe*, fitted with every electrical convenience, and within three days negotiate the journey in completest comfort.

But a few years ago Bulawayo was the capital of the war-loving Matabele nation, whose cruelties and barbarisms were beyond description; to-day there stands the metropolis of Rhodesia with 7,600 white inhabitants, possessing its municipality and massive gold mayoral chain, its churches, public library, hospital, park, cycle tracks, golf ground, and every institution a highly civilised town ought to possess, while its streets and houses are lighted with electricity, and several of its buildings would do credit to many an English town. Within two years Bulawayo will be the central point for four distinct railway lines—one to the Victoria Falls, another to the Gwanda gold fields, a third to Selukwe gold fields, Salisbury and Beira on the eastern coast, while the line to the Cape has already been some time opened.

Only a few years ago the life of any white man venturing into the country without Lo 'Bengula's permission was barely worth the purchasing. To-day there are forts scattered all over the country, and the telephone and telegraph connect even the distant districts as with a net, and farmers can now with security work their farms without the slightest fear of being murdered by the natives. The sense of security is experienced by the natives themselves, for fearing no bloodthirsty raids and "wipings-out," and no seizing of their people for slaves, they can afford in building their new kraals to believe that huge stockades are now no longer necessary unless to protect their cattle from the lions.

The scene of the lotus-life of the idle Matabele is now that of an active and rapidly developing industry, promoted by over 300 gold-mining companies, with a total issued capital of

£22,000,000, and total working capital of £5,000,000, possessing 75,000 claims, with 269 stamps erected, and for which over 250 other stamps are *in transitu* or on order, and whose total output of gold rose from 233,380 oz. in 1898–1900 to 194,170 oz. in the single year 1902, while nearly 116,000 gold claims were registered before the end of 1902.

But there is also romance on the broad-spreading veld, with its blue, ocean-like distances, among the goblin-castled heights of the kopjes, and its insect, bird, and animal life. There is, too, the romance of the prospectors' and hunters' camps, the romance of the transport rider and of the trooper, the romance of gorgeous sunrises and sunsets, of cloudless skies, and of the huge full moon flooding the country with her almost day-like light, of the Southern Cross, and of other alien stars unknown to northern eyes. Any night in Rhodesia is a romance writ in the jewelled cipher of the stars. There is the romance of attacks by lions, the chance of meeting huge pythons in the grass, the romance of shooting one's first buck, the romance of living on short-commons on the veld, and the sober romance of being "bushed"—the most fearful of all veld accidents. Surely the books describing Selous' huntings of elephants and lions in Rhodesia are replete with exciting romances, while Mr. Rider Haggard's *King Solomon's Mines* are known to "walk" the country.

Romance abounds in the history of the Abolosi and the Makalangas (the People of the Sun); of the Barotsi, Angoni, and Matabele. The customs, faiths, superstitions, witchcraft, and medicinal remedies form fascinating subjects of study, while their folklore and saga are sufficiently interesting to make one regret that so very little is known of them. Tales told by old pioneers of Lo 'Bengula's war dances, his warriors and their raids, of "beer-drinkings" and "smellings out" by witch doctors, still command the rapt attention of all.

But the romance of deep mystery and awe is the all-engrossing romance of Rhodesia. Whence the more than five hundred ancient ruins of temples and forts which are to be found scattered all over Rhodesia, and which Sphinx-like hold back their hidden secrets? We fear these Cyclopean walls will be bombarded with whole arsenals of metaphysical and scientific phrases of high-sounding import before the secret of their presence is wrung from them. Already have some modern globe-trotting Don Quixotes tilted against these grandly silent walls, and have placed their puny *quod erat demonstrandum* to their most original and dogmatic conclusions concerning them.

Fortunately such men as Baines, Mauch, Moffat, Bent, Wilmot, Schlichter, Holub, Condor, Willoughby, Selous, Maund, Phillips, and others, have admirably paved the way for archæologists and antiquarians, with the advantage of additional and later discoveries to carry the solution of the problem presented by the ruins a stage nearer to authoritative history.

Since the days when David Livingstone, journeying on his missionary tours through the territories which long years afterwards came to be known as Northern Rhodesia, called the attention of the world to the existence of the numerous and extensive ruins of ancient cities in this country, much has been written on this interesting subject. From Robert Moffat, the missionary pioneer of the fifties, to Dr. Schlichter, the archæologist of the very late nineties, is a long cry, but the period intervening has been prolific in men more or less conversant with the science of antiquarian research, who have done much to translate the myths and traditions concerning these massive ruins of a bygone age into something approaching historic fact.

Tom Baines, once the companion of Livingstone, with his inherent love of investigating the secrets of the past and with the quick and appreciative eye and enthusiasm of

a true artist, was the first to commence the work of reducing from chaos to method the information concerning the ruins of which Livingstone and Moffat had only given general and casual, but none the less accurate descriptions. The efforts of Baines in this direction should never be forgotten. He prepared the way for the troops of archæologists who have since devoted their attention to this country.

Dr. Mauch in 1871 may be almost considered as the Mashonaland contemporary of Baines in Matabeleland and Mashonaland. Though Mauch knew little of this country and his theories as to the history of the ruins have been shown to be far-fetched, yet the marvellous exactness of his descriptions of the ruins and the reliability of his information give him a high place among the early pioneers of local research.

Mr. Theodore Bent is so far the Trojan of antiquarians who have written on this question. He ranks first as giving the greatest volume of information and descriptive detail concerning the ruins. His work, taken in conjunction with the surveys, orientation, and mensuration of the temples obtained by Mr. Swan, constitutes a valuable text-book which every student of this subject must peruse. His quotations from the writings of professors of Arabian and Egyptian archæology are not only intensely interesting, but are to the point. His arguments in favour of the theory of the Sabæo-Arabian and Semitic origin of the ancient gold-workers in this country are accepted in the main by many students of archæology as being far the most probable. Major Condor, the Syrio-Arabian savant, in his reference to our ancient ruins throws a vast amount of light on the theory, while its worth can be inferred by perusal of the Arab writings of the ninth and tenth centuries.

Mr. Wilmot's investigations in the archives of Lisbon and Rome resulted in the bringing to light of the letters of the Jesuit missionaries (1560–1750, these are altogether

approximate dates), who previous to, or during the Portuguese occupation of these territories, laboured in the cause of Christianity among the peoples of the dynasties of Monomotapa and Mombo. His narration of tradition prevailing then among the Arab traders of the coast and also among the local races of that period, brings us nearer to the history of the ancients, between whose occupation and that of the various successive kings, who each assumed the dynastic names of Monomotapa and Mombo, many if not very many centuries must have intervened. The discovery of cannon at Dhlo-dhlo Ruins, together with the personal articles of the Jesuit missionary, and of the Portuguese fort to the north of the Chicago-Gaika mine, and those scores of others throughout the country are interesting, but these relate to a comparatively modern period. Mr. Wilmot's work contains information so descriptive of the times of the Monomotapa-Mombo dynasties that one can almost see in one's mind's eye pictures of the life of those partially civilised and powerful Makalanga peoples, whose influence was utterly destroyed when the northward march of the Amaswazi began; when Mombo was skinned alive at his royal kraal, which was built within the ancient ruins which crown the heights of Thabas Imamba, near the Shanghani River, on what is now known as the Hartley Hill Road.

Reverting once more to the ruins of the Zimbabwe periods, we can mention the works of Schlichter, Holub, Phillips, Maund, Willoughby, Selous, Professor Bryce, and some dozen others, in all of whose works is information of a valuable character. During the last five years numerous articles and papers on some one or another of these ruins have appeared in the local press and in home journals, and in some few English and German scientific magazines.

Unfortunately those whom we have named as writers on this subject have travelled over the same ground as each other, and they treat exhaustively concerning the same

sets of ancient buildings, which altogether include barely fifty ruins out of the five hundred at least which are believed to be scattered over Rhodesia. Our partial acquaintance with some fifty ruins, and our lack of any published information concerning some four hundred and fifty others, left much to be accomplished before our knowledge of these monuments of the past could be said to be complete. But a vast amount of hitherto unpublished information relating to some two hundred and more ruins is to hand, the work of accumulating which has occupied the attention of several whose minds possessed the natural bent for this particular study, and a considerable portion of whose leisure has been devoted to such research. Further, Messrs. Neal and Johnson, the lessees under the several grants to Messrs. Gifford and Jefferson Clark, of the right of investigating the ancient ruins south of the Zambesi, have gathered an additional quantity of most interesting and most important information since they commenced operations in May, 1895. Their information, together with the unpublished information secured by others, is now given to the public. The work does not pretend to ventilate mere theories, but it is brimful of facts arranged in such a way that he who runs may read.

Sir Henry Rawlinson, President of the Royal Geographical Society, delivered his Annual Address on the 22nd May, 1876, and referred to Mr. Baines' career and death in the following manner :—

"Thomas Baines, the well-known African traveller and painter of African scenery, died at Durban, Natal, on the 8th May, 1875, whilst preparing for another of his numerous expeditions into the unexplored interior of the Continent. He was a man of marked individuality of character, a born artist and explorer, a lover of wild life, and skilled in all the shifts and resources of an explorer's career. Few men were so well endowed with these and other qualifications for successful African travel, and perhaps none possessed greater

courage and perseverance, or more untiring industry than Baines. He was born at King's Lynn, in Norfolk, in 1822, the second son of a master mariner of that place. After receiving such an education as the views and circumstances of his parents admitted, he was placed with a coachbuilder to learn the art of heraldic painting on carriage-panels; but a strong, innate love of art soon led him to more elevated subjects, and he devoted much of the leisure time of his youth to sketching marine subjects from nature along the coasts of his native county. His ardent imagination fired him with a desire to see foreign countries, and in 1842 he left England for the Cape of Good Hope. It was in Cape Colony and in the neighbouring countries of South Africa that he was destined to pass the greater portion of his subsequent life; and it was here that he became better known even than in his native country. In fact, few men were thought so much of, or talked so much of, for many years in our South African Colonies as the artist-traveller, Thomas Baines. His extreme unselfishness and willingness to oblige, his prolific pencil, ready for anything—African landscape, scenes of native war, animal and Caffre life, or portraits of his friends—and his fluent pen, kept him continually before the Colonial public and made him popular. It is to be remarked also that many friendships which he formed in the Colonies were kept with constancy to the end of his life. In 1846–7 he left Cape Town and proceeded to the then nearly unknown regions to the north of the Colony for the purpose of sketching the scenes and incidents of the Caffre war then waging. Again, in the subsequent wars of 1851–3, he was busily engaged on the frontier in similar work, he having been attached to General Somerset's staff during the campaigns, through the intervention of his faithful friend, Mr. R. White. Several hundred sketches, displaying great vigour and vivid local character, were the results of his labours; many of which have since been on exhibition with his other works, in London and Dublin. On the 6th November, 1861, he was present at the action with rebel Hottentots at Water Kloof, when Colonel Fordyce, of the 74th Regiment, was

killed, and in fact, Baines, in his desire to sketch faithfully scenes of actual battle, generally strove to be in the front, and he was rich in anecdotes of adventure and narrow escape in the presence of the savage enemy.

"At the conclusion of the war in 1854 Baines returned to England, and was soon after his arrival, at the recommendation of our Council, appointed artist to the North-West Australian Expedition, under Mr. Augustus Gregory. During this arduous undertaking he distinguished himself and earned the approval of his leader and the Colonial Office by the zeal and ability with which he carried out a special mission with which he was entrusted, namely, a voyage in a schooner from the Victoria River to Java to procure fresh provisions for the Expedition, after their traverse by land from the Victoria to the Albert Rivers. The large series of sketches in oil made by Baines during this, as well as the subsequent Zambesi Expedition, were afterwards divided between the Kew Museum and our Society. On the termination of the Expedition in 1856, Baines returned to England, and on revisiting his native town was presented with the freedom of the borough by the corporation.

"When the Zambesi Expedition, under Dr. Livingstone, was organised, early in 1858, Baines was selected to accompany it as artist and storekeeper. An unhappy disagreement with Mr. Charles Livingstone, the brother of the great traveller, led to Mr. Baines' retirement, much against his own will, and he proceeded to the Cape. His love of exploration was at this time as keen as ever, and having become well versed in the use of astronomical and surveying instruments, under the supervision of Sir Thomas Maclear, Astronomer Royal at the Cape, he accepted the invitation of his friend, Mr. Thomas Chapman, an ivory-trader, to accompany him on a journey from the south-west coast to the Victoria Falls of the Zambesi. An account of this journey was published by him in 1864 on his return to England, under the title of *Explorations in South-West Africa; being an Account of a Journey in* 1861–2 *from Walvisch Bay to Lake Ngami and the Victoria Falls.* Besides a complete route-

survey and very numerous sketches, Baines made on this journey a collection of objects of natural history. He spent several weeks at the Victoria Falls, making drawings and measurements; and published, besides the narrative just mentioned, a folio volume of coloured lithographs of this remarkable cataract.

"The years 1864–8 Baines spent in England, employing himself in bringing out the works above mentioned, lecturing, writing, and drawing illustrations for various periodicals. His industry was without limit. Early and late he was to be found in his painting-room, or at the desk, and his time and abilities were at the service of anyone who needed them, with or without payment; for among his most striking characteristics was an utter indifference to worldly considerations. At the end of the year 1868 he again went out to Africa, under engagement with a company to explore the goldfields of the Tati, recently discovered, or re-discovered, by Carl Mauch and Mr. Hartley. He succeeded in obtaining the friendship of Lo 'Bengula, the successor of the celebrated Moselikatze, the paramount chief of the region in which lay the goldfields. From him he obtained valuable concessions for the company he represented; but nothing came of all his toilsome journeys and successful diplomacy; the distances were too great, and the company had no capital. Baines was never reimbursed his expenses, and had, on his return to Natal, to toil again as an artist to obtain a livelihood. The results of his explorations in the gold regions were, however, of considerable importance to geography. He mapped very carefully the country and the route thither from the capital of the Transvaal Republic, and wrote a description of the region, which is now about to be published under the editorship of his old and tried friend, Mr. H. Hall, of Cape Town. A reduction of his map was published in our *Journal*, vol. xli., in illustration of an abridgment of his journals by Dr. R. J. Mann. In 1873 our Council recognised the value of Baines' geographical services by presenting him with a testimonial gold watch. He undertook, subsequently, other journeys into the adjoining Caffre countries, always mapping most

carefully his routes and sketching scenery and people. After a visit to Port Elizabeth he planned a new journey, almost alone, to the gold district north of Tati, taking with him a small quartz-crushing machine, and had prepared all his outfit and waggons for the journey when he was struck down with the old enemy of so many African travellers—dysentery —at Durban, and died, as before stated, on the 8th May, 1875."

The following obituary notices are extracted from the journals of the Royal Geographical Society:—

"It is with much regret that we record the premature death of Mr. J. Theodore Bent, well known to the geographical world for his archæological explorations in various parts of Africa and South-West Asia. Mr. Bent had but recently returned from his last expedition to Sokotra and Southern Arabia, on which he had suffered severely from malarial fever. A chill caught on the way home brought about a relapse, and pneumonia setting in, he succumbed after a short illness on May 5th, at the early age of forty-five years.

"The deceased traveller was the only son of the late James Bent, of Baildon House, near Leeds. His schooldays were spent first at Malvern Wells and afterwards at Repton, whence he proceeded to Wadham College, Oxford. After studying for the Modern History School, he graduated with honours in 1875. In 1877 he married Mabel, daughter of the late Robert Westley Hall-Dare, D.L., of County Wexford and Essex, who subsequently became his companion on all his exploring journeys. To escape the rigours of the English winter, Mr. and Mrs. Bent annually left their house in Great Cumberland Place to proceed to a more genial clime, and in this way they soon became thoroughly acquainted with many of the countries of South Europe. Mr. Bent had a remarkable facility for acquiring languages, and he was a fluent speaker both in Italian and modern Greek. In 1885 he embodied the results of his journeys in the Archipelago in a volume entitled *The Cyclades, or Life among the Insular Greeks.* His taste for archæological research led him from 1889 onwards to choose for his scene of action such districts as

by their antiquarian remains presented problems relating to the history of the ancient nations or races of the East. In that year he visited the Bahrein Islands, in the Persian Gulf, the result of his investigations being to show the great probability that the group was a primitive site of the Phœnician race. After a visit to Cilicia Tracheia in 1890, he, during the following winter, set himself to solve one of the most interesting questions connected with the ancient history of Eastern Africa and South-West Asia, viz. the origin of the ancient remains which had been discovered at Zimbabwe, in Mashonaland. A careful exploration of the ruins led him to conclude them to be the work of pre-Mohammedan inhabitants of Southern Arabia, who are known to have been an enterprising commercial people in very ancient times. Mr. Bent described the results of this journey in a book called *The Ruined Cities of Mashonaland* (1892).

"At the end of 1892 Mr. and Mrs. Bent again set out for Africa, this time to investigate the extensive ruins in the north of Abyssinia. This journey threw much new light on the early connection between the people of Abyssinia and those of South-West Arabia, whence both the writing and language of the old Abyssinians must have been derived. It is described in Mr. Bent's volume, *The Sacred City of the Ethiopians*. In the winter of 1893–4 Southern Arabia, the mother country of both the peoples whose antiquities had been examined in the two preceding years, was visited and a considerable addition made to our knowledge of the little-known Hadramut country. This was revisited during the succeeding winter, whilst that of 1895–6 was devoted to exploration on the African coast of the Red Sea. The last, fatal journey is said to have resulted in the discovery of fresh archæological matter in Sokotra and Southern Arabia, in the latter of which some new ground was broken.

"Mr. Bent's kindly and genial nature had endeared him to a wide circle of friends, by whom his loss will be keenly felt. To our Society, of which he became a Fellow and

Member of Council in 1890, he always readily communicated the results of his journeys, and both the *Proceedings* and *Journal* bear witness to the wide range of his travels. Besides the works mentioned above and various magazine articles, Mr. Bent in 1893 edited a volume on *Early Travels in the Levant* for the Hakluyt Society."

"It is with great regret that we record the premature death, from the results of malarial fever, of Dr. Henry Schlichter, well known to our readers as a zealous student of African geography, past and present. We believe that Dr. Schlichter never fully recovered from the effects of illness contracted during his expedition to South Africa in 1897–8, but though he travelled in the hope of benefiting by a change of air, he finally succumbed at Waiblingen, Würtemberg, at the beginning of April last.

"Dr. Schlichter was born and educated in Germany, but after graduating at Stuttgart University he came to this country and eventually became naturalised as a British subject. For some years he held the post of consulting scientist to the Jaeger Company, but he devoted much of his time to study and research on geographical questions, especially those connected with Africa and the history of geography generally. In 1891 he read before our Society an important paper on Ptolemy's *Topography of Eastern Equatorial Africa*, in which he showed that the descriptions of that geographer were quite capable of being fitted in with the facts brought to light by modern discovery, and were therefore based on actual knowledge. A nearly allied subject to which he paid special attention was that of the ruins indicating the existence of ancient gold-mines in South-East Africa, and on this he contributed several papers, both in *Petermanns Mitteilungen* and in the *Geographical Journal*, after the expedition of Mr. Theodore Bent had redirected public attention to the problem presented by the ruins, throwing valuable light on the ancient commercial intercourse between Arabia and Eastern Africa. About the

same time he directed his attention to the more practical question of the employment of photographic processes by explorers for purposes of survey—a method which has since reached so important a development. A preliminary paper by him attracted considerable attention at the meeting of the British Association in 1892, and the method was afterwards more fully described in a paper published in the *Geographical Journal* in November, 1893.

"In 1897 Dr. Schlichter found an opportunity of continuing his researches on the gold-mining ruins at Zimbabwe by personal investigation on the spot, having received the appointment of geologist to the British South Africa Company. During his examination of the mineral resources of the Company's territory he traversed some little-known districts in Matabeleland and Mashonaland, making for the first time a careful examination of the ruins in the Mombo district of the former, as well as of better-known ruins at Zimbabwe and elsewhere. The results of these journeys were placed before our Society in a paper read in February, 1899, and published in the *Journal* for April of that year. During this expedition Dr. Schlichter discovered considerable deposits of gold, and he was, up to his death, a zealous champion of the prosecution of mining enterprise in Rhodesia."

CHAPTER II

RUINED TEMPLES AND FORTS IN RHODESIA—ZIMBABWE THE METROPOLIS—DISTRICTS AND CAPITAL TOWNS.

THE evidences of a past civilisation in Rhodesia are so manifold, and so distinctly patent, as to make the subject of investigating our ancient ruins one of the most fascinating of the several researches to which this country opens wide and practically virgin avenues.

Much information has already been secured by men of undoubted scientific attainments, who have been long enough acquainted with Rhodesia to grasp, to some extent, the at present vexed question of the ruins, and to wring out some of the hidden secrets pertaining to the vast hives of industry which at one time existed in these territories.

Yet much more has to be accomplished, both in the direction of obtaining and in the more delicate work of marshalling and concreting the results of investigations, before any scientist of position would risk his good name by making dogmatic assertion as to the peoples who toiled, evidently to good purpose, on the gold reefs of Rhodesia.

The purpose of this work, in which will be avoided the unnecessary employment of involved and learned terms, which confuse the mind without enlightening it, is not to advance or advocate any particular theory, but to be hospitable to all suggestions, so long as they are known to contain an element of fact, and even of legitimate probability. Our aim throughout will be to allow facts to speak for themselves.

This territory may, or may not be, the Land of Ophir. But though it were the Land of Ophir (and in passing we must admit that it is recognised on the evidences so far, and only so far partially obtained, it is somewhat difficult

at present to argue against this theory), yet the brief for the view of Rhodesia being Ophir is incomplete, and some proofs have yet to be added before a perfect case could be submitted for final judgment.

To build up a theory based upon the investigation of one or two ancient ruins only would be as fatal, absurd, and valueless, besides being misleading, as an attempt to theorise concerning the astronomical system upon the examination of one or a few stars.

Ancient ruins, as defined below for the purposes of this work, vary greatly in the style of their architecture, designs, construction, elliptical character, radii of curvature, orientation of points, extent, situation, period, evident purpose of erection, and other points.

For instance, in architecture we have, it is held, at least four recognised varieties—

(*a*) Best or first Zimbabwe period.

(*b*) Second Zimbabwe period.

(*c*) Decadent Zimbabwe period.

(*d*) Period when local races endeavoured, with ill success, to adopt Zimbabwe style of architecture.

While in many ruins are found two or more styles of Zimbabwe architecture together, evidently showing reconstructions or additions of the later periods.

Again, the designs vary, and include the (*a*) Chevron, (*b*) Dentelle, (*c*) Herring-bone, (*d*) Chess-board or Check, and other patterns.

Nor need every article discovered in an ancient ruin be necessarily ancient, for investigations within the ruins, in some instances to a depth of fifteen feet, have proved that a succession of races, with long periods of time intervening, have occupied these buildings, and in some instances as many as four occupations are known, and all at different levels.

Our definition of an ancient ruin is: *Ruin of fort, temple, or other building exhibiting examples of architecture of one or more of the Zimbabwe periods.*

We therefore, and for the present only, exclude those buildings built of stone with mortar to be found in Mazoe and Manicaland, as well as those built of piled-up, unhewn stones without mortar, which exist all over Rhodesia, mostly on kopjes, built, as is conjectured, by one of the two or more races of Abolosi (the latter race or races of conquerors taking the name of the first), also the ruins of old Portuguese buildings found in the north and east of Mashonaland and in parts of Matabeleland, and also the circular stone buildings of the Makalangas.*

It is estimated that in Rhodesia there are very considerably over five hundred distinct sets of ancient ruins, as defined above, all built during the Zimbabwe periods, and presenting the recognised features of Zimbabwe architecture. Of these over five hundred groups of ruins almost two hundred can be located on the map, can also be specified by name and also described. A further number cannot at present be located on even the most recent map, owing to the positions of rivers, kopjes, and kraals in the remoter districts being ill-defined, and in some instances altogether incorrectly given, though particulars as to where such ruins can be found, together with some description of the buildings, are ready to hand. These latter ruins are so far unnamed, the natives calling all such ruins "Um-Tañala" (walls), or else "Zimbabwes."

Many of the ruins of major importance, probably of towns, completely cover immense areas, in some cases as much as one and even two square miles, and the remains of temples are clearly discernible in most. Others are of minor importance, without temple or gold-smelting furnace, and from their scattered and outlying situations are considered to have been forts, or places of refuge, for the defence of the workers in the various gold-reef districts, or when found in chains,

* All writers agree that at one time the Makalangas built circular huts of stone. See Chapter x.

though a few miles apart from each other, forts for the protection of roads which led towards Sofala on the coast.

A map of Rhodesia, on which are marked the positions of ancient ruins, as far as information received enables them to be marked, serves as a key to the solution of what has been regarded by many writers as inexplicable, viz. the general distribution of ancient ruins of various types throughout the country without any apparent method, system, or special purpose, beyond the general one of gold-mining. Such a map, to a considerable extent, reveals design and method in locating the several classes of buildings in the various parts selected, and very largely explains the difficulty of the apparently promiscuous distribution of the ruins.

The difficulty which until recently existed in arriving at some idea of the designs of the ancients in distributing their buildings may be easily explained. The writers who have dealt with this subject—Robert Moffat, Mauch, Baines, Bent, Schlichter, Peters, Wilmot, Holub, Phillips, Maund, Du Toit, Willoughby, Selous, Professor Bryce, and others—traversed practically the same portions of country and described the same identical ruins, but each dealing with some few extra ruins not mentioned by the others. The total number of distinct and separate ruins described in their books does not nearly exceed fifty, while many of these are ruins of minor importance and belong to the later Zimbabwe periods. Bent ranks first, with descriptions of thirteen sets of ruins visited, while he mentions some ten others which he did not visit. Dr. Schlichter comes next to Bent, but he does not locate or describe many ruins, though he saw, especially in Inyanga district, more ruins than any other writer.

With the location and description of but fifty ruins in one line of country only, it would have been manifestly absurd to have indulged in theories as to the purpose shown in the distribution of these buildings; but to-day, with a knowledge of considerably over two hundred sets of

ruins (and several of these include groups of from three to twelve distinct and separate ruins), with notes as to which period of Zimbabwe architecture they are severally believed to belong or mainly represent, and also with the general location of many scores of other ruins, we discover that the distribution of the various types of ruins, taking into consideration the periods of architecture to which each belongs, unfolds, naturally and without necessity of any strained supposition, an order and a method, both uniform and universal, in all parts of Rhodesia, where these monuments of antiquity are to be found.

To explain: Zimbabwe, by tradition, architecture, and modern exploration, and some writers say, by the age of the orientation of the temple, was admittedly the first home of the foreign gold-seekers in these territories. Possibly it also became their last home before their exodus. Here is the Zimbabwe style of architecture in its purest form shown in the older buildings upon and around which are building extensions of later Zimbabwe periods, each of which differs in many essentials from the others, and which, like the European styles of architecture that required many centuries for their evolution and general adoption, must have taken very long periods of time for the succeeding styles to have become employed to the exclusion of the earlier styles, that is, supposing the later type of Zimbabwe architecture was not introduced directly into this country. Zimbabwe being the earliest centre occupied, and its growth, as shown by the additions of buildings of various periods, having been gradual and extensive, it seems, from its earliest times, to have occupied the position of chief metropolitan centre for the life, worship, and gold-recovering and smelting industry of these territories. In fact, there is a general consensus of opinion among all writers on this subject, that Zimbabwe was undoubtedly the metropolis of this ancient colony.

But if Zimbabwe were the metropolis, what were its

relations to the various portions of the colonial territory? Here a glance at the distribution and grouping of the ruins, both those of major and minor importance, may assist us to a reasonable conclusion. This ancient colony was evidently well organised and was divided into districts, each district distinct from the others, each with its capital town, possessing its extensive and well-defined temple remains and numerous gold-smelting furnaces. While scattered both near and far around each of these capital towns are scores of ruins of smaller buildings, mostly without temples or traces of ancient smelting operations, which appear to have served as bases of supply for the workers on the adjacent reefs or shed-gold areas, or as temporary treasure-stores, or as refuge or defence against the attacks of the savage negroid races who lived in these territories, and from whom, probably, the slaves were drawn who toiled for their alien taskmasters.

The chains of ancient forts which occupy isolated positions of great strategic value at long distances from gold-bearing areas may be explained as forts protecting roads, each chain trending due east not only connecting centres, but leading in a well-defined line continued in Portuguese territory towards the port of Sofala.* These will be dealt with later.

It may be of interest to state that so far as the ruins which have been discovered are concerned, all these are built on the granite formation, except some few which are built on the diorite and country rock formations.

In this work which we have undertaken we have endeavoured, in the spirit and with the enthusiasm of Old Mortality, to secure data, leaving admittedly recognised archæologists and antiquarians to use such accumulated and verified data in solving the intricate problems presented by the ancient ruins of Rhodesia.

* The ruins on the spurs of hill ranges in Sardinia guarded high roads.—*La Marmora.*

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CHAPTER III

SUPPOSED SABÆO-ARABIAN OR HIMYARITIC OCCUPATION OF RHODESIA CONSIDERED

IN giving an outline sketch of the arguments supporting the hypothesis of the Sabæo-Arabian or Himyaritic occupation of Rhodesia, it should first be stated that this branch of the Semitic family was, at the earliest dawn of history, occupying Yemen or Southern Arabia.

Since the exploration of the Bahrein Archipelago by the late Theodore Bent in 1889, the traditional view that the Phœnicians had their original home on the Arabian side of the Persian Gulf is no longer open to serious doubt. In the chief member of the group the eminent archæologist discovered "a vast sea of sepulchral mounds" containing countless two-storied chambers of the recognised Phœnician type, and yielding numerous carved ivories and other objects characteristic of early Phœnician art. Hence the general acceptance of Bent's conclusion that "the original home of the Puni was the group of the Bahrein" (*Geograph. Journal*, Jan., 1890, p. 17).

At some unknown date, but certainly not later than about 3000 B.C., the great body of this enterprising people migrated westwards, and founded several maritime states—Tyre, Sidon, Byblos, Beryba, and others—on the eastern shores of the Mediterranean, where they appear to have gradually exchanged their South Arabian (Himyaritic) speech for the North Semitic language of the surrounding Canaanitish and Israelitish populations.

From the Phœnician kingdoms on the Mediterranean offshot the Phœnician colonies of Carthage, Sardinia, Malta, Sicily, Cyprus, Hippo, Utica, Pelusium, Cilicia (Tarsus),

Memphis (in Egypt), and those in most parts of the Mediterranean. These were the people who worked for tin in the British Isles, who, some believe, left the memorials standing to this day of their nature-worship in Ireland, Scotland, England, and even in Iceland, and who gave Spain its earliest history. Whether they were the same people who erected the stone temples, circles, and monoliths in South America and the South Sea Islands is a question not arising in connection with Monomotapa. Later we shall notice the connection of Rhodesia with the Mediterranean Phœnicians.

Some of the arguments advanced as to the Sabæo-Arabians having occupied Rhodesia may be stated as follows:—

1. The almost identical resemblance pointed out by Professor Müller, the great South Arabian archæologist, of Zimbabwe to the Temple of Haram of Bilkis, Queen of Sheba, which is near Marib, the capital of the old Sabæan kingdom of Southern Arabia.*

Marib.	Zimbabwe.
Plan, system of curved walls, geometrical building, orientation.	Practically the same.
Inscription on Marib is in two rows, and runs round a fourth of the circumference.	Two rows of chevron pattern run round a fourth part of the circumference.
Half of elliptical wall on the side of inscription is well built and well preserved, but opposite side is badly built and ruined.	The same at Zimbabwe, where the pattern side of the wall is well built. The other portion is rough.
Temple was dedicated to the goddess Almaquah (the star Venus, which is called	Highly probable that Zimbabwe was a Sabæan Almaquah temple, as it is orientated

* "Burgen und Schlösser" (ii. 20).

in Himyaritic tongue Ialma-quah, or Almaq-illuminating). and geometrically built for astronomical purposes, as in all cases of such buildings used for the worship of Almaquah. Sacred birds found at Zimbabwe are said to represent Venus, the morning star.

This argument by analogy can also be applied to almost all the Zimbabwes in Rhodesia which were built during the first Zimbabwe period.

2. Herr Brugsch emphasises the Sabæan occupation of Monomotapa, but believes the images of the birds found at Zimbabwe represented the zodiacal light, the previous and the after-glow. M. Naville is especially of opinion that there exists a strong connection between Venus, the star of the Sabæans, and the goddess worshipped at Zimbabwe.

3. The historical fact that the Sabæan nation was enormously rich in gold.

(*a*) In 1700 B.C., on the Egyptian monuments, were depicted the exports of Punt, such as ostrich feathers, leopard skins, giraffes, lions, cynocephalous apes, elephants' tusks, and ingots of gold, all essentially products of South-Eastern Africa. Aristeas, Agatharcides, and Old Testament references —such as "The merchants of Sheba . . . were thy merchants; they occupied in thy fairs [markets] . . . with all precious stones and gold" (Ezek. xxvii. 21, 22)—all testify to the enormous gold-holding of the Sabæans, who supplied the then known world with the metal.

(*b*) There is common agreement of authorities that in Arabia itself very little gold was to be found. The gold must therefore have been imported.

(*c*) Aristeas states that the gold brought to Rome did not come *from* Arabia, but was brought *by* the Arabians.

4. The great majority of recognised archæologists and

antiquarians of Europe who have written on this question express views favouring the hypothesis that the first occupation of this country was that of the Sabæo-Arabians, or Himyaritics of South Arabia, while the minority of such writers do not argue against the suggestion.

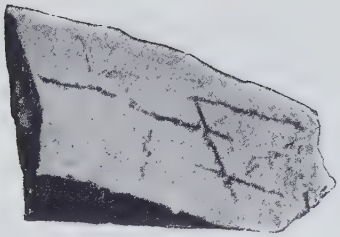
Herr Glaser, the Arabian traveller and decipherer of Himyaritic inscriptions, states: "So much is absolutely certain, that Himyar (Arabia) then possessed almost the whole of East Africa. Such a possession, however, was not won in a night, but rather presupposes . . . centuries of exertion."

Dr. Schlichter, in the *Geographical Journal* (July, 1893), fully describes the commercial relations of the Sabæans with South-East Africa, and deals with the analogy of the ancient Arabian religion and the worship practised by the ancients at Zimbabwe.

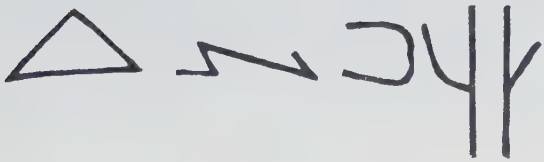
Mr. Wilmot, in *Monomotapa* (p. 77), writes: "So far as it is possible to judge, it seems probable that it was the people of Saba (the Sabæans) in Arabia Felix who . . . landed on the coast of Sofala, penetrated to the mines, and established a colony there." To concrete Mr. Wilmot's conclusions (pp. 86, 89) in condensed form, we find he is of opinion that most probably the Sabæo-Arabs of Yemen, who were the traders and marine carriers of the Southern or Indian Ocean (Oceanus Æthiopicus of the Romans) and held the monopoly, first discovered the place and erected the temples for their stone-worship, similar to those raised in Arabia, and worked for gold.

The Periplus states that the Sabæan king Kharabit was in A.D. 35 in the possession of the East Coast of Africa to an indefinite extent.

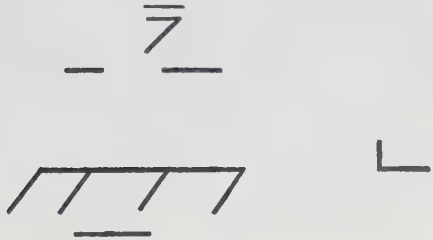
Some writers note a connection between the name of the Sabæ, or Sabi River, in Rhodesia, and the kingdom of Saba, or Sheba, in Arabia. The Sabæ, or Sabi, forms the great natural outlet to the coast for the populations of Rhodesia between the Zambesi and Limpopo Rivers.



PORTION OF STONE WITH LETTERING

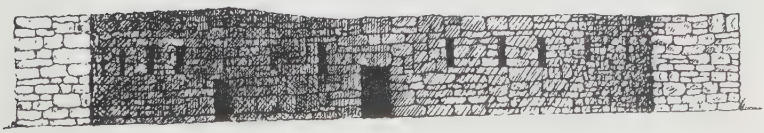


SUPPOSED ANCIENT SEMITIC INSCRIPTION FROM A SLAVE-PIT OF INYANGA (ACTUAL SIZE)



LETTERS ON A ROCK IN BECHUANALAND

SECTION OF PITS, INYANGA



SECTIONS OF OLD PORTUGUESE FORT INYANGA

In the Preface to Mr. Baines' work it is stated that "Saba (Monomotapa and Rhodesia) lies more inland behind Sofala, and is supposed by some authorities, including Josephus, and no less a personage than the author of the Koran, to be the ancient kingdom of the queen who visited Solomon. This region is drained by a river called the Sabia."

Dr. Karl Peters finds in the name Massapa (or Massaba) indication of an ancient Sabæan settlement. He discovered near Injakafura a great number of betyli* such as formed an object or emblem of religious worship in the oldest Semitic cults, and among these betyli he found a phallus, such as were connected with the original Semitic nature-worship. He describes the ruins of Injakafura as being built in precisely the same style as those of the Semitic races.

Other arguments in favour of the Sabæan occupation are bound up in those employed to prove that Ophir was the modern Rhodesia, which we shall now consider in outline only.

WAS RHODESIA OPHIR?

The vexed question as to whether the land of Monomotapa (Rhodesia) was the land of Ophir can best be stated by considering the Sabæo-Himyaritic occupation, for we find from sacred and secular writings that it was the merchants of Sheba (South Arabia) who, in addition to being the gold merchants of the whole world, also exported to the Phœnician centres of Tyre and Sidon practically all the enormous quantity of gold those wealthy cities required, and which history avers they possessed—"Tyre heaped up . . . fine gold as the mire of the streets" (Zech.). It is admitted that the gold mines of the Ural Mountains could not have contributed more than a fraction of the quantity of gold possessed by the Phœnicians. Old Roman and Grecian historians are unanimous in stating that the Sabæans were

* *Betûli*, *Baitulia*=sacred stones. Hebrew *Bethêl*, Phœnician *Bêthûl*. These stones were considered not merely the "dwelling-place of God," but even as God Himself.—*Wilmot*, p. 41.

the gold merchants of the world and that they purveyed it to all the then known countries, but none suggest that the gold came *from* Arabia, while all assert that it was brought *by* the Arabians.

If, it is asked, the Phœnicians had then been in occupation of Monomotapa (Rhodesia) as their gold-producing colony—for this country was ever in ancient days occupied for the main purpose of gold winning, and not for mere colonisation and settlement—what possible need could there have been for them to have bought their gold from the Sabæans?

The terms "Ophir" and "Tharshish" of Scripture are essentially generic. There were at least two places to which the name "Tharshish" was applied. "Ophir" was employed as the title of a country rich in natural resources, as is the modern title of "El Dorado." The location to which this generic title of Ophir was applied must have been either in India or South-East Africa, unless we suppose with Prof. Keane that Ophir was not the gold-yielding land, but the gold mart, the importer and distributor of the precious metal. Practically all gold came from the south; it was not found in Arabia to any appreciable extent.

SUGGESTED INDIAN OPHIR.

The Indian Ophir, if it existed, could only have been the Malabar Coast. Mr. Bent writes:—

"India has never furnished large quantities of gold to the commercial world. In fact, it was frequently an article of import into that country. So far as ivory is concerned, it is well known that Asiatic elephants were, from time immemorial, made use of as beasts of burden, and that their value in this way prevented their slaughter."

The authorities whose opinions are inclined to favour the location of Ophir in India are few, and these are by no means unanimous amongst themselves, nor are they at all emphatic in stating the arguments in favour of such location. Besides, in their discussions on this question they lacked the

information we now possess as to the later discoveries of ancient ruins in Rhodesia.

Dr. Schlichter says :—

"Fortunately, the same period" (Biblical Ophir period) "comprises the exploits of the man who first explored India, viz. Alexander the Great. Among his followers were many who would have collected news about a gold-belt in India, provided that the latter was actually existing. But no gold country whatever existed there ; on the contrary, all Indian tribes were almost devoid of gold, and Arrianus, our best and most reliable source of information about the campaigns of Alexander the Great, states as emphatically as possible as follows :—

"'Alexander and his army have refuted most of the stories in this direction, with the exception of some who have obviously made incorrect statements. It has thus been ascertained that all the Indians through whose territories Alexander and his army marched (and he marched through many of them) have no gold.' Therefore it is evident that India cannot possibly be the Ophir of antiquity."

SUGGESTED SOUTH-EAST AFRICAN OPHIR.

All the imports brought by Hiram for King Solomon could only have been obtained in one country. His voyages were made every three years (see later). Only Africa could have furnished them altogether.

HIRAM'S "GOLD."

1. Gold was, according to biblical and secular writings, the principal export of Ophir.

2. Africa has always been known in ancient history as being the great gold-producing country of the world.

3. Numerous authorities, such as Bruce, Huet, Quartremere and Guillain, as well as the great majority of later writers on the Rhodesian ruins, in considering the historic gold output of this country, favour the claims of Monomotapa (Rhodesia) to be the Ophir of Scripture. Mr. Wilmot

(pp. 36, 37) writes: "The African Ophir was inland from the Sofala coast in South-East Africa (Monomotapa)." Again, Mr. Wilmot (pp. 86–99), summing up the arguments of authorities, writes: "The preponderance of evidence is decidedly in favour of the principal Ophir of Scripture having been inland from the Sofala coast in the country of Monomotapa." Mr. Bent, who examined several of the ruins and visited the ancient gold-workings, arrives at the same conclusion.

4. The presence in Rhodesia of ancient ruins, dating from practically prehistoric times, some of which are known to have been standing in 1100 B.C., the orientation and astronomical lines of which, in some instances, testify to an age considerably earlier than that period. The styles of architecture show several periods of occupation, each of which, it is computed, covered many centuries of years. The internal evidences, gained by exploration in the ruins, show that the principal industry of the ancient occupiers was that of gold-winning. Such monster buildings were not erected for an unpayable industry.

5. The presence in Rhodesia of ancient gold-workings, covering areas of many hundreds of square miles, and most extensive alluvial and shed gold-workings by the ancients.*

6. Mr. J. Hays Hammond, the gold-mining engineer, in 1894, the very early days of the modern prospecting of gold-belts in Rhodesia, examined certain portions of some of the gold-belts, and reports: "That an enormous amount of gold has been obtained from these workings in the past is, however, unquestionable. Millions of pounds sterling worth of gold have undoubtedly been derived from these

* "In very remote times there existed, as is known from Egyptian monuments, a trade from South-East Africa into the Red Sea. . . There are other indications that gold used to come from East Africa, but so far as we know it has never been obtained in quantity from any part of the coast between Mozambique and Cape Guardafui. Thus there are grounds for believing that a traffic *between the Red Sea and the coast south of the Zambesi* may have existed from very remote times. Of its later existence there is, of course, no doubt." — Professor BRYCE, *Impressions of South Africa.*

sources." Later computations, embracing all the at present ascertained gold areas in Rhodesia, based on a very partial estimate as to the amount of reef extracted by the ancients, and also taking such reef at only a portion of the value per ton of the present Rhodesian output over the mill-plates, show that the ancients must have extracted very many millions of pounds sterling worth of gold from the Rhodesian portion of Monomotapa alone.*

7. The period of the ancients working for gold in Rhodesia is admitted by authorities to have covered both previously and subsequently that period in which biblical references were made to Ophir. These references, twelve in all, range from Genesis to Isaiah, and consequently cover the whole of Jewish history before the exile.

8. The goldfields of Monomotapa were known to the world before Hiram's time. (Note: the ancient Grecian legends as to voyages for gold describe what may have been the voyages round Africa to the Monomotapa gold-export centre.)

9. Hiram voyaged for King Solomon's gold, ivory, slaves, apes, precious stones, sandal-wood, and peacocks every three years. The Scriptures do not state how long these voyages required to accomplish. In any event, the gold for export awaited him, and had not to be obtained and afterwards taken down to the coast after his arrival. The gold obtained in the single voyage (1 Kings ix. 28) was four hundred and twenty talents, or a present value of four million pounds sterling.†

10. The Periplus states that Rhapta (also mentioned by

* Mr. Telford Edwards, one of the leading mining engineers in Rhodesia, in 1897 estimated the value of the ancient output of gold from this country at £75,000,000 sterling at least.

† RAWLINSON in *Phœnicia.*

Ptolemy) was a dependency of Sabæa or Yemen, and Dean Vincent imagines Rhapta to have been ten degrees south of the Equator (near Quiloa).

11. Arab legendary tradition largely associates South-East Africa with Ophir and the Queen of Sheba. For example, Conto, a Portuguese writer, referring to Mount Fura, in Rhodesia ("Fura" is believed by some to be a corruption of "Ophir"), where there are very extensive and Cyclopean ancient ruins, states that the Kafirs called it *Fur*, and the Moors, *Afur*. He fixes Rhodesia, and mentions the Masouvo River (Mazoe) and Tete, on the Zambesi.

HIRAM'S "IVORY."

Since the Night of Time Africa has always been recognised as the chief ivory-producing country of the world. Here elephants have no value as beasts of burden; all are wild. Ancient historians all allude to the enormous quantity of ivory annually exported from Africa, and of the trade with South-East Africa in ivory. Elephants are still found in Rhodesia, but now mainly in Northern Rhodesia, where the ivory trade still flourishes.

HIRAM'S "SLAVES."

The slaves brought by Hiram to King Solomon came with the same expedition as the gold and ivory. It is most probable that the gold and slaves came from the same country and by the same port. Tradition associates these slaves with negroid peoples, and all *bas reliefs* representing the period of the building of King Solomon's Temple represent slaves with negroid cast of features.

The "Apes" were, according to *bas reliefs*, cynocephalous, a species common to South-East Africa. "Precious stones" might have been diamonds, for which South Africa is famous. "Sandal-wood" is a generic title, and many woods found in South-East Africa can fairly come under this title. "Pea-

cock" is also a generic title to cover all birds of brilliant plumage, and such are plentiful here.

Milton, perhaps, conveys the prevailing opinion of his times with regard to the location of Ophir when, in *Paradise Lost*, xi. 399–401, he writes—

> "Mombaza, and Quiloa, and Melind,
> And Sofala (thought Ophir) to the realm
> Of Congo, and Angola farthest south."

The Arabs of Sofala, according to their own traditions and Portuguese records, have always associated the memory of the Queen of Sheba with the country lying inland behind the coast country of Sofala.

Ogilby, in his folio on African geography, principally, however, translated from Dapper, who again quotes Alvarez, says, "Yet divers make Ophir the same with Sofala, because it hath much gold and ivory, and if all the mainland included between the river Magnice and Quama and submitting unto Monomatapa, be all, as Barros calls it, Sofala, as well as the rest on the sea coast, it can with great reason be judged that this country be none but the Golden Ophir of Solomon, partly because of the houses there to be found near the gold mines, not built after the manner of the country, but seem the work of foreigners, and partly because of the inscriptions being strange and unknown. Moreover, Lopez, in his voyage to the Indies, affirms that among the inhabitants of this country there remain books which show that Solomon every three years had his gold thence. . . . Besides gold and ivory, this region produced apes (dog-faced baboons) in myriads, and if for peacocks we read ostrich feathers, and for almug trees we substitute ebony or stink-wood, it leaves nothing to be desired."

Dr. Schlichter says:—

"From the Old Testament references to Ophir and Arrianus it is evident that India cannot possibly be the Ophir of antiquity. Only other coast countries of the

Indian Ocean can come into consideration, and Arabia and equatorial East Africa have been mentioned in connection with the Ophir problem.

"But against this assumption stands the clear text of the three most reliable and oldest passages of the Old Testament, viz. Kings ix. 26–28 and x. 11, 22. It seems unintelligible how anyone who compares these passages in a literal and critical translation (for instance, that by Professor Kautsch), could assert that the passage in chapter x. verse 22 did not allude to Ophir. It was emphatically stated that we had to deal with a sea navigation which extended to remote countries—in fact, to the end of the then known world—and it is therefore clear that this gold land of antiquity could neither have been on the coast of the Red Sea nor on that of equatorial Africa or Arabia. One thing which appeared to be established beyond doubt was that the territories known to-day as Southern Rhodesia were, one thousand years before the Christian Era, a gold-producing country of a large extent, and colonised by the early Semitic races round the Red Sea, viz. by Jews, Phœnicians, and Western Arabians."

Huet, writing early in the eighteenth century on the voyages of Solomon, declares that he feels compelled to accept the fact that the place called "Ophir," from which gold was fetched by the combined Jewish and Tyrian fleet, was unquestionably on the south-east coast of Africa, in that part known under the names of Mozambique and Sofala; that at the time when King Solomon reigned the Hebrew and Phœnician navigators traded with these shores; and that this commerce was anterior to the exact period referred to in Scripture. For the gold of Ophir was known to the Idumeans before the time of David, and the Book of Paralipomenon (the Chronicles) records the fact that this prince received a portion of it. "To seek out the origin of this commercial movement we must go back to those hardy pioneers (probably the Sabæo-Arabians)

who were able to show the Phœnicians the geographical position of Ophir and lead them to the mines of gold." Mr. Wilmot observes, "This is indeed true. The fleet of King Solomon and Hiram never discovered Ophir. Its treasures were known previously, and we are therefore now confronted with the fact that some of the Zimbabwes of Monomotapa were built more than one thousand years before the Christian Era."

Dr. Karl Peters, in stating his case for the location of Ophir in Monomotapa, quotes, *inter alia*, the following:—

"'And Hiram sent in the navy his servants, shipmen that had knowledge of the sea, with the servants of Solomon. And they came to Ophir, and fetched from thence gold, four hundred and twenty talents, and brought it to king Solomon' (1 Kings ix. 27, 28).

"'And she [the queen of Sheba] gave the king an hundred and twenty talents of gold, and of spices very great store, and precious stones: there came no more such abundance of spices as these which the queen of Sheba gave to king Solomon. And the navy also of Hiram, that brought gold from Ophir, brought in from Ophir great plenty of almug trees, and precious stones' (1 Kings x. 10, 11).

"'And all king Solomon's drinking vessels were of gold, and all the vessels of the house of the forest of Lebanon were of pure gold; none were of silver: it was nothing accounted of in the days of Solomon. For the king had at sea a navy of Tharshish with the navy of Hiram: once in three years came the navy of Tharshish, bringing gold, and silver, ivory, and apes, and peacocks.'

"In 1 Chronicles xxix. 4, 'I have given,' says David, 'even three thousand talents of gold, of the gold of Ophir, and seven thousand talents of refined silver, to overlay the walls of the houses withal.'"

He observes, "The best-based theories are three, of which the one places Ophir in Arabia, another in India, and the third one in South Africa," and adds, "I, personally, since

I have been studying this problem, have always been of opinion that we have in the Semitic word 'Ophir,' or 'Afer,' the root of our present name of the continent of Africa, 'Africa' being the Latin adjective of 'Afer,' by which name the Phœnicians called the native inhabitants of Carthage. This purely philological derivation led me to believe at once that we must look for Ophir not in Arabia and India, but in some part of Africa."

Ophir has been placed in Armenia, in Phrygia, in Spain, in Peru, in the Malayan Peninsula, in Ceylon, and in Sumatra. Christopher Columbus, says Dr. Peters, was firmly convinced that he had found Ophir in the West Indies, and reporting to the King of Spain on his third voyage, he writes, "The mountain Soporo" (the name for Ophir, which in the Septuagint is written "Sophora"), "which it took King Solomon's ships three years to reach, on the island of Haiti, has now come with all its treasures into the possession of their Spanish majesties."

Ben Jonson's lines show where he thought Ophir to be located—

> "Here's the rich Peru,
> And there, sir, are the golden mines,
> Great Solomon's Ophir."

The above-stated arguments in favour of Ophir being the present Rhodesia by no means exhaust the tale of "proofs" advanced by those authorities who favour this theory. Unfortunately, when this question was raised in the principal papers and scientific journals in Europe a few years ago, there was practically little or no evidence from Rhodesia forthcoming. Mr. Bent (1891) had only visited some ten ancient ruins, and he speaks of thirteen others he was told of, and several of the ruins mentioned by Mr. Bent were of minor importance, and of the later Zimbabwe periods. Even Professor Bryce, who in 1895 visited Rhodesia, says: "I have heard of ten or twelve pieces of wall in different parts of the plateau (Mashonaland and Matabeleland);

probably others exist." All the late writers, excepting Dr. Schlichter, mention a less number of ruins than Mr. Bent refers to, and the majority of them are the same identical ruins.

The most able, exhaustive, and reliable arguments are undoubtedly those advanced in the works of Dr. Schlichter, on the question of the ancient ruins in Rhodesia, while Dr. Karl Peters has many further "proofs" gained in the Mount Fura* district, which place very few writers on this subject appear to have visited.

But from the more than five hundred ruins known to exist in the Rhodesian portion of Monomotapa, of which (thanks to the discoveries of Messrs. Neal and Johnson, the sole lessees under the grant to explore all ancient ruins south of the Zambesi) we propose in this work to give particulars concerning some two hundred ruins, and further proofs may probably be forthcoming to strengthen the theory advanced by those who already thoroughly believe that Rhodesia is the Ophir of the Scriptures. Additional evidences may also probably be afforded by the many known ruins scattered over the present Portuguese portion of Monomotapa. However, it is beyond the sphere of the writers of this work to indulge in any theories on the Ophir question, their province being to state all information of authoritative character concerning the actual ruins themselves, and allow these facts to tell their own story.

THE SUGGESTED SUBSEQUENT OCCUPATION OF MONOMOTAPA (RHODESIA) BY THE PHŒNICIANS.

Having stated in outline the arguments in support of the theory of the Sabæo-Arabian occupation of Monomotapa, we come to consider, also in outline, the arguments in favour of the subsequent occupation of Monomotapa by the Phœnicians of the Mediterranean.

* The gold mines of Mount Fura were, in 1721, known to the Portuguese as "Ofura."

We have noticed that the main family of the Phœnicians passed from their cradle in the Persian Gulf to found their separate kingdoms on the eastern shores of the Mediterranean, leaving branches of the family—the Sabæans and Himyars—in supreme control of Southern Arabia, which branches in time became the monopolist marine-carriers, explorers, colonisers, and miners on the west coast of the Indian Ocean, and purveyed the greater quantity of gold required by their Phœnician brethren in Syria.

But, in course of time, just as the power of the Phœnician kingdoms waxed, so that of the Sabæo-Arabians waned, until we find that, not by conquest, but by natural absorption, the Phœnicians themselves became not only the masters of the Mediterranean and northern seas, but of the Indian Ocean and the colonies that the Sabæo-Arabians had planted, and the trade and wealth for which the Sabæans had been so famous passed into the hands of the Phœnicians.

The theory is, and it appears well founded so far as it can be proved, that the Phœnicians, who had then become the premier explorers, merchants, navigators, miners, and metallurgists of the world, occupied among other former Sabæo-Arabian colonies, the country of South-East Africa, which included Monomotapa, or Rhodesia.

In occupying Monomotapa, while still adhering to the main type of architecture common to the Sabæo-Arabians and themselves, they introduced fresh features in building, as shown not only by new Zimbabwes, which they themselves are believed to have erected in Monomotapa, but by the extensions and reconstructions of the original Zimbabwes.

In the Great Zimbabwe the peculiarity of building in terraces rising in tiers is altogether absent, and the original portions of Zimbabwe itself are held to have been built in the earliest period of ancient architecture extant in Rhodesia. Of course, at Zimbabwe there are reconstructions and extensions of the original building, and these reconstructions and

THE EAST OF THE EGYPTIANS AND PHŒNICIANS

extensions are of various periods, with the features of such periods prominent.

But in several parts of Rhodesia and other portions of Monomotapa there have been erected on the slopes or summits of the kopjes massive structures which, while following generally the first Zimbabwe type, have been built in three or more high-terraced tiers rising to the summit of the hills, surrounding them, and sometimes completely covering them. This "wedding-cake" feature, as it has been termed, is absent in all Zimbabwes built in the first period. Yet all these later Zimbabwes present all the evidences of having been erected by nature-worshippers, and contain the orientated temple "open to heaven," the sacred circle, the conical towers ("the high places"), the monoliths, and every evidence of Phallic worship. This class of Zimbabwe is represented, among many others, by Dhlo-dhlo, Regina, Meteme, and Khami.

There exists a marvellous similarity between these later Zimbabwes and many of the three thousand nauraghes, or terraced fortresses which cover the island of Sardinia. In both the Rhodesian and Sardinian erections evidences of nature-worship are abundant. "The age," writes Mr. Wilmot, "of the Sardinian nauraghes goes back to a remote antiquity —to the Bronze Age—to a time when the Romans were not known on the Tiber." Gerard (p. 6) writes: "I have no hesitation in considering the numerous round edifices of Sardinia, which are known under the name of nauraghes, as monuments of the worship of Baal." Moreover, by some of the authorities on this question, it is believed that these ruins were erected by the Libyans, for the monuments of Phœnician worship are to be found in the Sardinian nauraghe ruins, both monoliths and stones, with the most unmistakable emblems representing a religion so vicious and debasing that in Palestine it incurred the righteous denunciations such as were hurled against Tyre and

Sidon and the "high places" of Samaria where Baal was worshipped.

Some of the arguments advanced in support of the theory of the Phœnician occupation of Monomotapa may be mentioned, as follows:—

1. The known absorption by the Phœnicians of the influence and commerce of the Sabæo-Arabians in the Southern Ocean and its coasts, which occurred during the period in which Monomotapa was worked by the ancients for gold.

2. The erection of later Zimbabwes in Monomotapa which, while adhering to the type of the first Zimbabwe period, yet had a development in architecture peculiar to themselves, and their marvellous similarity in this respect to the nauraghes of Sardinia, built, as is conceded by many authorities, by the Libyans.

3. The exact representation of the same form of worship, with Phallic emblems, both in Rhodesia as well as in Sardinia or other Mediterranean colonies of Phœnicia, which are admitted by high authorities to be Phœnician. Betylæ (sacred stones), as found so plentifully in Rhodesia, have been discovered in all countries once subject to Phœnician influence.

4. The discovery at Zimbabwe of the soapstone cylinder of quern shape, with rings of rosettes on the top and sides, which rosettes are believed to represent the sun, and are common in Phallic decoration. This cylinder, which is considered as undoubtedly Phœnician, is similar to the one found at the Temple of Paphos, in Cyprus, which was once a leading Phœnician colony. The rosettes are also similar to those on the sacred cone of the great Phœnician Temple of the Sun at Emesa, in Syria, and also to the rosettes on the Phœnician sepulchral stelæ in the British Museum.

5. The discovery of the soapstone birds at Zimbabwe, pronounced by authorities similar to the images of the birds

sacred to Astarte, worshipped by the Phœnicians; also of Phallic emblems distinctly Phœnician.

6. The discovery at Zimbabwe, by Mr. Bent, of the soapstone ingot mould corresponding exactly to the tin ingot, of undoubted Phœnician manufacture, discovered at Falmouth, and which is now in the Truro Museum.*

7. The discovery of true Phalli.

8. The presence of cones and conical buttresses. The cone† at Zimbabwe is held to be a facsimile of the sacred cone in the Phœnician temple at Byblos.

9. The historic record of the voyage of the Phœnicians under King Necho about 610 B.C. direct from the Red Sea to the coast of South-East Africa (Monomotapa).

These arguments could easily be enlarged upon and added to, but sufficient is shown to satisfy one that, at any rate, some substantial grounds exist for believing that the Phœnicians once settled in Rhodesia and worked upon its vast areas of gold reefs.

All the aid that Portuguese records can render in elucidating the mystery which enwraps the ruins is most ably summed up in Mr. Wilmot's book, *Monomotapa.* The Portuguese hold of these inland territories (sixteenth and seventeenth centuries) was singularly weak and tentative, far from permanent, and only comparatively brief. Not being colonists, they were compelled to keep by force of arms what they had conquered. They never completely subjugated the native tribes of these parts, and consequently were always at war with warlike people. Too timid to journey far from the rivers which served as their lines of

* Professor C. Le Neve Foster, F.R.S., states that Injakafura, near the Zambesi, where Dr. Peters locates Ophir, meant "a great mine," corresponding to the name Wheal Vor, in Cornwall. The old tin-smelters of Cornwall were Phœnicians, and like the natives of mediæval Monomotapa and of Rhodesia of to-day, they used quills for holding the small quantity of gold obtained in their tin-streaming operations.

† See Dr. Schlichter's works for descriptions of conical towers in Arabia.

communication with the coast, they did not penetrate to all parts of Monomotapa. Coming along the Mazoe and Umfuli Rivers, they occupied the northern portions of Mashonaland, and with the aid of their roughly built and loopholed forts, they held for a short time territory extending in a south-westerly direction as far south as Sebakwe, where they established themselves for a time at their settlement, about eight miles' distance in a direct line N.N.E. of the Chicago-Gaika Mine, on the north bank of the Sebakwe River. Here was built their last-known southerly fort, the ruins of which now cover fifty acres of ground, with loopholed walls linking several kopjes on both sides of the river. The two cannon, one bronze and the other iron, found at the ancient and important ruins at Dhlo-dhlo, in the Upper Insiza district, and which bear the Portuguese coat of arms, may have been bought, through the medium of the Jesuit missionary, from them by Mombo, whose kraal was built among the ruins at Dhlo-dhlo; this Mombo being the son of Mombo who lived in a kraal built among the ancient ruins of Thaba Imamba, and who was skinned alive when the invasion by the Amaswazie took place.

Jesuit missionaries and Portuguese traders, however, succeeded in penetrating much farther into the heart of the country. Jesuit missionaries are believed to have resided in or near No. 1 Ruin at Khami. The territory being so precariously held, it is not at all surprising the Portuguese did comparatively little gold-mining. There are evidences of their having continued some of the workings of the ancients, especially at the Bonsor Mine, and the discovery of their double-pointed iron picks, from which the wood handles had rotted away, once perplexed the prospectors of Rhodesia. On the Zambesi they appear to have been far more successful, as the number of their ruined forts and settlements along the river banks seem to testify.

NOTE.

Selected extracts from *Monomotapa* (*Rhodesia*), by the Hon. A. WILMOT.

(p. xvii.) Mr. Rider Haggard writes: "Mr. Bent proved to the satisfaction of most archæologists that the ruins of Zimbabwe are undoubtedly of Phœnician origin. There are the massive and familiar Phœnician walls, there the sacred birds, figured, however, not as the dove of Cypris, but as the vulture of her Sidonian representative, Astarte, and there in plenty the primitive and unpleasing objects of nature-worship, which in this shape or that are present wherever the Phœnician reared his shrines. There also stands the great building—half temple, half fortress—containing the sacred cone in its inner court, as at Paphos, Byblos, and Emesus. . . . Although some testimony is lacking, the many external evidences force the student to conclude . . . that these buildings must have been constructed and that the neighbouring gold mines were worked by Phœnicians, or by some race intimately connected with them and impregnated with their ideas of religion and architecture." Mr. Rider Haggard debates the statement of MM. Chipiez and Perrot, that "no inland Phœnician town is known to history."

(pp. 36, 37) Mr. Wilmot writes: "The builders of the Zimbabwes in South-East Africa and of the nauraghes in Sardinia were nature-worshippers of the early Phœnician cult, when stone-worship was one of the leading features of that religion."

(*ib.*) "The arguments of MM. Perrot and Chipiez point to the fact the nauraghe builders (in Sardinia) came from Libya."

(*ib.*) "We may venture to attribute a very remote antiquity—the Bronze Age—to both classes of buildings. Certainly we can scarcely be wrong in concluding that the oldest of the Zimbabwes of South-East Africa were erected before the ninth century B.C. There is little doubt that some of them existed when Hiram, King of Tyre, obtained gold for the Temple of Solomon."

(p. 89) "Most probably the Sabæo-Arabians of Yemen (South Arabia) discovered the place and erected temples for their stone-worship, similar to those raised in Arabia, and put up their Himyaritic inscriptions and worked for gold. This people were the traders and marine carriers of the Southern Ocean, and held the monopoly." "The preponderance of evidence is decidedly in favour of the principal Ophir of Scripture having been inland from the Sofala coast in the country of Monomotapa."

(p. 47) "In the Zimbabwes of South-East Africa are no images of gods—no idols, except blocks of stone. This seems to give some indication of the early periods when the temple forts were built. Of course, roughly hewn images of birds have been found, but these are scarcely idols. The vulture was the *totem* of an Arabian tribe at the time of the Himyarite ascendency."

(p. 48) "In the ninth century B.C. the Phœnician religion began to decline. Though it flourished in the Phœnician colony of Carthage, it languished in its original home (Phœnicia)."

(p. 73) "The Arabs were so intimately connected with the colonisation and settlement of the countries of the Southern Ocean that we must consider all history there in connection with that of this great ancient people (Phœnicians). They held exactly the same stone-worship of the early Sidonian and Tyrian periods, and their monuments and inscriptions testify that they unquestionably practised the same religion as that professed by the men who built the South African Zimbabwes."

(p. 77) "Arabia is regarded by very great and competent authorities as the primitive centre of the foundation of the Semitic races, and we are told that 'the study of actual populations of Eastern Africa proves that, from an epoch which is lost in the night of time, the relations between Arabia and Africa were very important and very numerous."

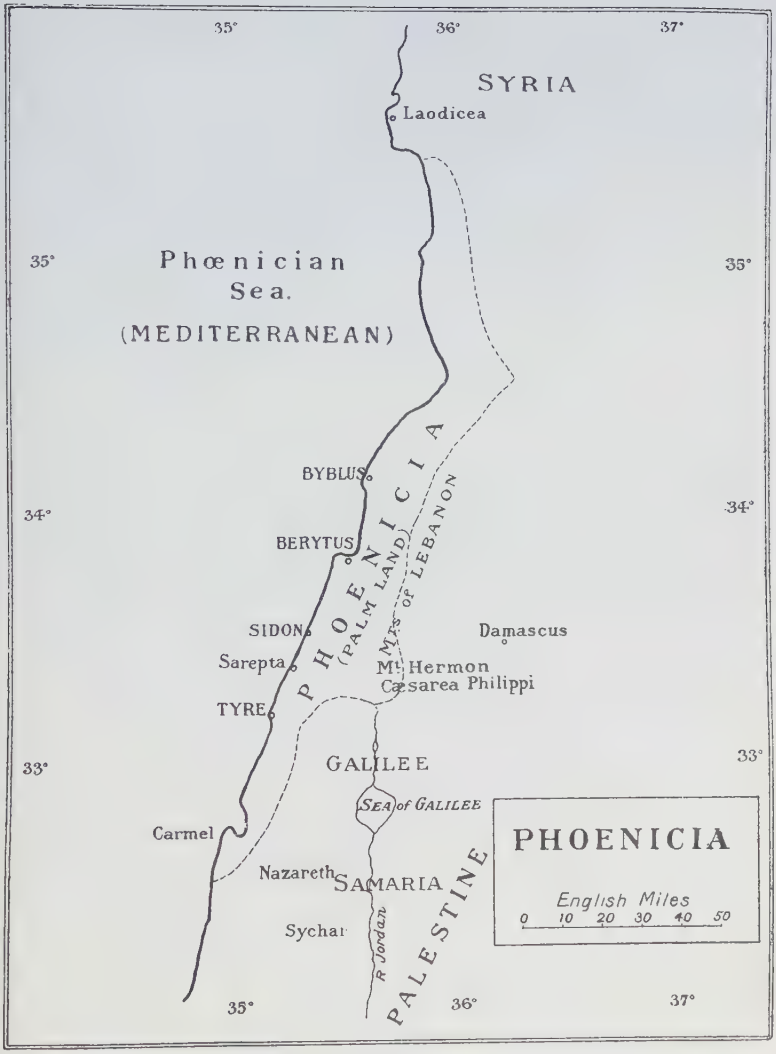
(*ib.*) "So far as it is possible to judge, it seems probable that it was the people of Saba, in Arabia Felix, who . . . landed on the coast of Sofala, penetrated to the mines, and established a colony there."

PHŒNICIANS AND HEBREWS.

Note founded on the works of Rawlinson and Kenrick.

The connection between the Phœnicians and Hebrews was strikingly intimate, the Hebrews being a younger branch of the Semitic family, from which the Phœnicians sprang.* The language of the Phœnicians was as closely related to that of the Hebrews as German to Dutch, or Portuguese to Spanish, while the religion of the Phœnicians in their earliest days was, like that of the Hebrews, polytheistic. The kingdoms of Phœnicia adjoined Palestine (known to the Phœnicians as Netu) on the north, near the hills of Galilee, and places in Phœnicia are constantly alluded

* "The Jews owned the same blood and speech as the Phœnicians."—PERROT and CHIPIEZ.


35°
36°
37°
SYRIA
Laodicea
Phœnician
Sea.
(MEDITERRANEAN)
BYBLUS
BERYTUS
PHOENICIA
(PALM LAND)
MTS. OF LEBANON
SIDON
Damascus
Sarepta
Mt. Hermon
Cæsarea Philippi
TYRE
GALILEE
SEA of GALILEE
Carmel
Nazareth
SAMARIA
Sychar
R. Jordan
PALESTINE
PHOENICIA
English Miles
0 10 20 30 40 50

to in both the Old and New Testaments; for instance, Tyre and Sidon, Paneas (Cæsarea-Philippi), Lebanon, Mount Hermon, Sarepta, Mount Carmel, Gebal, etc.

The settlement of the Phœnicians was far anterior to the exodus of the Israelites from Egypt. In Judges we read that the Phœnician Sidonians "dwelt careless, quiet, and secure." In area Phœnicia did not cover more than four thousand square miles of coast land, less than the area of at least one English county, and yet it became the world-power of its time.

Certain Phœnician tribes are mentioned early in Genesis, while the names of Melchizedek (Gen. xiv. 18) and Abimelech (*ib.* xx. 2) are purely Phœnician. The Phœnician deities of the polytheistic age—both adapted and original—such as Baal, Astoreth, and Moloch, are frequently mentioned; also Dagon (1 Sam. v. 2; Macc. x. 84), while the sacred stones, pillars, towers, and "high places" of Phœnician worship are repeatedly referred to by the prophets. The tribe of Zemarites (Gen. x. 18), Gebal (Joshua xiii. 5; Ps. lxxxiii. 7; Ezek. xiii. 5); Baal-Zephon, a Phœnician port (Exod. xiv. 2, 9); Elath, a Phœnician colony (1 Kings ix. 26–28); Akko, Acre (Judges i. 31); Tyre, "a strong city" (Joshua xix. 29), Tartessus, a group of Phœnician colonies in Spain (Gen. x. 4; Ps. lxxii. 10; Isa. lxvi. 18); migration of Phœnicians westward (Gen. xiv. 1–12); intermarriage of Jews and Phœnicians (1 Kings xii. 1, xvi. 31; 2 Chron. ii. 14); Gideon destroyed the sacred tower of the Midianites (Judges viii. 7); Phœnician trade with Hebrews (1 Kings v. 9; Ezra iii. 7); Phœnicians obtain wheat, honey, wine, and oil from the Hebrews (Ezek. xxvii. 17); Phœnician luxury (Ezek. xxvi. 16, xxvii. 3–25, xxviii. 13); Tyre, Phœnician capital (Ezek. xxvii. 3); Tyre wealthy in gold (Zech. ix. 3); violence of Phœnicians (Ezek. xxviii. 16); Phœnician slave-traders (Ezek. xxvii. 13); "pleasant houses" of Tyre (Ezek. xxvi. 12); Phœnician mining described (Job xxviii. 1–11); Hiram furnished David with cedar trees (1 Chron. xxii. 4); Hiram's father a Phœnician, his mother a daughter of the tribe of Dan (2 Chron. ii. 13); joint fleets of Phœnicia and Israel on Mediterranean and Indian Ocean (1 Kings ix. 27, 28, x. 15, 22); Hiram supplied Solomon with material for the Temple (2 Chron. ii. 3–10); Phœnician artisans employed in the building of the Temple (2 Chron. ii. 17, 18); Hiram manufactured ornaments for Solomon's Temple (2 Chron. ii. 14); Solomon conceded a district of Galilee to the Phœnicians (1 Kings ix. 11);

Jews build "high places" to Baal (Jer. xxxii. 35, xix. 5); Ahab builds Temple of Baal in Samaria, also at Jezreel (2 Kings xxi. 7, xxii. 6); Christ converses with a Phœnician woman (Mark vii. 26); Phœnicia receives the gospel (Acts ix. 19); Phœnicia "nourished" from Palestine (Acts xii. 20).

We also read in Scripture that Solomon married a Phœnician princess, that he worshipped in the Temple of Baal at Sidon, that the daughter of the King of Tyre and High Priest of Astoreth (Phœnician deity) married Ahab, King of Israel, that Athaliah, daughter of Jezebel, a Phœnician princess, married Ahaziah, King of Judah, when the Phœnician worship became the State religion of Judah.

The monotheistic Hebrews despised their polytheistic kinsmen on account of their worship, hence we read that "the Jews had no dealings with the Samaritans" who had accepted the Phœnician worship. The "good Samaritan" was most probably a Phœnician in religion, hence his kindly action to the distressed Jew was remarkable. Note also the argument of the Syro-Phœnician woman as to the place where God should be worshipped, the religion of the Phœnicians being purely material, while that of the Jews was spiritual.

"The Temple of Solomon, though modelled in some respects upon the 'Tabernacle of the Congregation,' must be regarded as essentially a Phœnician building, at once designed by Phœnicians and the work of Phœnician hands" (Rawlinson).

The two pillars are considered to have been identical with the sacred pillars reared in the Phœnician Temples of Baal.

See also *Religion of the Semites*, by Robertson Smith.

As to Phœnician and Carthaginian influence, both ascertained and conjectured, in Demerara, Mexico, Peru, Yucatan, North America, Polynesia, and Europe, see Wilmot's *Monomotapa* and various works on Phœnicia.

Professor A. H. Keane, London, dealing with Dr. Peters' theory connecting the ancients of Rhodesia with Egyptian Hamites, states: "Nothing so far has been advanced to upset the view put forward by the late Mr. Theodore Bent that the first colonisers and exploiters of South Zambesi were not Egyptian Hamites but Arabian Semites, most probably Himyarites (Sabæans) or Phœnicians, or both." Professor Keane cites Herr B. Moritz in the *Verhandlungen der Gesellschaft für Erdkunde*, Berlin, 1896, pp. 2–9, who strongly opposed Dr. Peters' conclusions. Dr. Peters has since been "converted" to the theory of the Sabæo-Arabian or Himyaritic occupation of Rhodesia.

CHAPTER IV

AREA OF ANCIENT RUINS AND ANCIENT WORKINGS—MATOPPA, ZIMBABWE, AND SOFALA MAIN ROADS—THE MATOPPAS AND THE ANCIENTS—KING SOLOMON'S ROAD—"THE WALL OF GOD"—LO 'BENGULA'S IVORY—WAS THERE A NORTHERN MAIN ROAD?—SOFALA.

IN defining the area covered by the ancient ruins and gold-workings in Rhodesia, identically the same difficulty presents itself as is experienced by the cartographers who prepare even the most recent maps of Rhodesia in defining the limits of the various gold-belts. At some points certainly, owing to the nature of the formation of the rock, the limits of gold-belts may be absolutely determined, but at other points there are strong probabilities that some of the present accepted boundaries may be extended where the formation is favourable, but this can only be decided on when fuller prospecting work has taken place. Mr. John Hays Hammond, reporting in 1895 on the Rhodesian gold-belts, writes: "Until more detailed investigations have been carried out it is impossible to define the boundaries of the gold-belts."

So it is with the area of our ancient ruins. A line drawn round the outlying ruins so far discovered will provide a well-defined area, but just as there are outside our present ascertained gold-belts "favourable but unprospected formations," so outside the line embracing the outlying ruins are there favourable prospects of discovering still more ruins and

workings. According to old Portuguese and Arab writings, the kingdom of Monomotapa extended much further to the south than that point (Murchison Range) in the Transvaal Colony shown on the map we have prepared, but evidences in the shape of ancient ruins have so far only been actually discovered to the point so marked.

Mr. Wilmot states that "Monomotapa is the great interior empire said by some writers to extend from Mozambique to the Cape of Good Hope. In reality it extended only between the Zambesi and the Limpopo Rivers, although it is possible that tributary kingdoms south of the Limpopo may have existed." Father J. Santos, writer of the *History of Ethiopia* (1570), states, "The coast of Eastern Ethiopia extends to the Cape of Good Hope," while a map of Africa dated 1528 shows the Oceanus Æthiopicus to extend along the east coast of Africa as far as the most southerly part of the continent, and it makes "Monomotapæ Imperium" to occupy country almost extending from slightly to the north of the Zambesi above Tete to within a short distance of the Cape of Good Hope, and covering the central land between the Atlantic and the Indian Ocean with the exception of the low coast land on all sides.

Johnstone (1603) states, "In the residue of Ethiope raigne divers powerful princes as the kings of Adell, Mononungi, Monomotapa, Angola, and Congo. Monomotapa is mightier and more famous than the rest. This kingdom stretches to the Cape of Good Hope, for the viceroys of that huge tract do acknowledge him for their sovereign and superior governor." Duarte Barbosa (1516) also states that the kings of all countries between Mozambique and Cape were subject to the King of Benemotapa. Old Arab and Portuguese writers include in Monomotapa all the region south of the Zambesi, extending to the country of the Kafirs (Pays de Caffres) even to the banks of the Orange River. In *Les Champs d'Or* (1891) the author states,

"Opposite Tete (to the south) commenced Mokaranga, or Monomotapa properly so called," thus confirming the French map of 1705, which shows "Etats du Monomotapa" as south of the Zambesi and practically along its whole length.

But to return from the mediæval area of the Monomotapa to that of the ancient builders of the Rhodesian Zimbabwes: it must be borne in mind that it is reported that Proto-Arabian inscriptions have been found in Bechuanaland, while old workings exist at the Monastery Diamond Mine, in the Orange River Colony; and these workings are believed by some to be ancient, bronze spear-heads with skeletal remains of men of huge stature having been discovered here. On the north-eastern border of Natal, and on the hills forming the precipitous banks of the Tugela at Ingoberu, material evidence has been found of working and occupation by ancients, but the era of these ancients is very difficult to fix. There is also a hill on the borders of Zululand, which, according to the oldest native tradition, has always borne the name of Thaba I'Suliman. Old workings have been discovered east of Mafeking. But these districts do not present any tangible evidences of ancient occupation in the shape of massive ruins, such as are so numerous in Rhodesia, and therefore we exclude them from the ancient area as defined later.

Again, the native nomenclature of certain kopjes and other places in Rhodesia is highly suggestive of there being ancient ruins on or near them, and it must not be forgotten that these peculiarities of nomenclature have in the past frequently led to the discovery of numerous unsuspected ruins, and the examination of such places which exist beyond the area so marked on the map has yet to be taken in hand.

The northern limit is, for our present purposes, purely

tentative, and may be taken as the line of the Zambesi from the Victoria Falls to east of Lupata Gorge. It is believed, however, that the ancients worked for copper on the Upper Kafukwe River, about 150 miles north of the Victoria Falls; also it is known that they washed for alluvial gold far to the north of Zumbo and Tete, and reports of the existence of ruins beyond the Zambesi (not of the Portuguese forts that stud the length of the river) are numerous, and even of some districts in which they are to be found; but the evidences are so meagre that until more definite particulars are forthcoming it would be safer to accept the present tentative northern boundary of the Monomotapa area as formed by the Zambesi from the Victoria Falls to east of the Lupata Gorge.

The western and southern boundaries of the area can be better defined. Commencing at the head-waters of the Matetsi River in Wankie's district, about forty-five miles due south of the Victoria Falls, the western boundary runs south-south-east to a few miles west of Tati Concessions, thus including the ruins on the upper head-water tributaries of the Gwaai, also the Upper and Lower Khami ruins, and the ruins at Bulalema and Old Tati, and other ruins in the Concessions, while proceeding to Elibi, the Shashi, Macloutsie, and Lotsani groups of ruins are included. From Elibi the line runs south-west to a point just beyond the Murchison Range in the Transvaal Colony, and includes districts where ancient gold-workings are numerous, where are ancient ruins which were reported upon by Mr. Baines in 1876. The line then continues north-east to a point on the Lower Sabi River in Portuguese territory, about seventy miles from where the Sabi enters the Indian Ocean, some sixty miles south of Sofala. This line embraces the chain of ancient ruins on the Lower Sabi.

The north-west boundary line may be drawn from somewhat east of the Lupata Gorge to a point some seventy miles

north-west of Sofala, including the Mount Fura and Inyanga districts, in which ancient ruins are so numerous, also ruins in Portuguese territory to the north-east of Inyanga, and known ruins much further south.

There now only remains a boundary line to be fixed connecting the southern extremity of the line from east of the Lupata Gorge with the northern extremity of the line running up from the Murchison Range to the Lower Sabi, a distance of some eighty or a hundred miles, on the length of which lies the ancient and historic port of Sofala, which from the very earliest days of definite history has been recognised to have been the gold-shipping port of the country of Monomotapa (Rhodesia).

Inclosed by this line, which runs parallel to the coast line, and some seventy or more miles inland, are the rising series of plateaux which on their western side join Mashonaland, from the north of Inyanga down to the junction of the Lundi and Sabi Rivers. These plateaux are in Portuguese territory and form the watersheds of many rivers and streams. Here are numerous ancient ruins, and maps of these parts are marked as follows: "Ancient ruins in this neighbourhood," and "Ancient ruins reported," etc., while the existence of numerous ruins is within the knowledge of travellers and hunters of repute.

The hypothesis of many leading antiquarians is that Sofala was the port used by the nature-worshipping Sabæo-Arabians of Yemen (South Arabia), who are believed to have first discovered the natural wealth of Monomotapa, and who, it is conjectured, built its earliest Zimbabwes; that it was subsequently the port of the Phœnicians of the Eastern Mediterranean, when Tyre and Sidon were approaching the zenith of their fame, and when the go-ahead young Phœnician colony of Carthage was commencing that newer-world growth which in later times overshadowed and altogether eclipsed the influence of its mother-country; these Phœnicians, so it

has been suggested, also building their Zimbabwes and extending the older Zimbabwes; and that later it was the port of the Arabs (all these three races being members of the great Semitic family, which research avers was originally seated in Arabia), who again, it is believed, built Zimbabwes, but somewhat different in style of architecture, though following on the main lines of similar buildings found in Southern Arabia; while it is not disputed that Sofala was the port of the old Portuguese, who built their own forts and settlements in portions of Monomotapa only.

This hypothesis as to the various occupations of Monomotapa has in some important matters a basis provided by research, history, and tradition, but its full and general acceptance would be premature until all the evidence in its favour had been taken and examined. At the same time it is admitted that argument against the acceptance of this hypothesis is extremely difficult. Practically the bulk of the external evidences obtainable has been exhausted in its favour, but the internal evidences to be gained from the actual ruins themselves will prove of vital importance in the solution of this problem, and from the more than five hundred ruins in Rhodesia, and the large number in Portuguese territory, it is more than possible that such evidence may be soon forthcoming.

Were the hypothesis shown to be well founded, we should at once have a satisfactory explanation of the varying styles of the Zimbabwe periods of architecture, and, for instance, as an illustration, we might fairly conclude that no discovery of Sabæo-Himyaritic signwriting could be expected except in those Zimbabwes built in the first-period style.

From the western extremity of the Matoppas and stretching through the districts of Gwanda, Filabusi, M'Pateni, Belingwe, Victoria (also M'Tibi), Lundi and Sabi in Rhodesia, and following the Sabi River over the boundary into Portu-

guese territory, till it reaches within about seventy miles of the coast, is a line of ruins some of which rank as high in importance as any yet known, excepting, of course, the Great Zimbabwe, which line is so clearly defined that one draws the only conclusion, that along it was the southern road to Sofala, in fact, the Matoppa-Zimbabwe and Sofala main road of the ancients, of which on either side lie the gold districts which they have so extensively worked.

The Matoppa Range, for some inexplicable reason, has always been associated in the minds of Rhodesian pioneers and settlers with the ancient gold-seekers. Perhaps this connection was brought about by the mere popular idea that were the military rat-trap gorges and Sinbad recesses of the Matoppas searched, some substantial evidences of the ancients in the shape of treasure-caves might be discovered.

Perhaps a better knowledge of the Matoppa Matabeles' tradition concerning "The Wall of God," which is said to run through the range in its most inaccessible parts, might assist in discovering what substratum of truth underlies the tradition; or what, if any, element of fact, though much obscured and perverted by relation during many ages, may be brought to light. Again, when Colonel Baden-Powell returned from his reconnaissance of the rebel position in the Tuli Gorge, his troopers, many of whom were men of repute in Bulawayo, described an ancient wheel-cut road coming southwards from out the Matoppas, with ruts worn deep down into the rock, and with large trees growing up between the ruts, which they called "King Solomon's Road." About B.C. 1100 wheeled chariots with horses were counted by thousands in Assyria. Probably the difficulties of transport of horses over sea, the tetze fly, and disease may have militated against the use of the horse by the ancients. Massudi (about 940) says of the inhabitants of Zenj and Sofala, "they have neither horses nor mules, and they do not know

these animals." But it is known that the ancients possessed oxen.*

Further, the alleged existence of ancient signwriting on the face of a kopje on the northern side of the range, and which some have declared resembles the Himyaritic signwriting, may have originated the whole idea. All these points may be intensely interesting, but without substantial evidence to confirm report it would be unwise to carry the speculation further.

This popular idea may have been encouraged by the fact that Lo 'Bengula's large store of ivory, which he was known to possess before he fled northwards, has never been accounted for. Before both the war and the rebellion, the natives conveyed to the Matoppas large quantities of grain, which were stored in caves in almost inaccessible parts of the range. The popular mind conjectured that there also was stored the ivory for safety, but wherever it may have been secreted, the exact location remains a mystery. The fear of the spirit of Lo 'Bengula would in itself be sufficient to compel the Matabele to religiously keep the secret from the white people. Certain is it that immediately after the rebellion was over, when the Matoppa Matabele were known to be starving, some tusks were brought out of the hills and exchanged for grain food. One of these tusks, measuring four feet, was brought to the Rev. D. Carnegie, then at the L.M.S. station at Hope Fountain, and exchanged for food; which tusk Mr. Carnegie handed over to the Administrator. However, the possible discovery of Lo 'Bengula's ivory has no connection with any of the Zimbabwe periods.

Before leaving the question of the area occupied by these ancient ruins and workings, it might be well to state that there has been no evidence of ancient mining for gold at Barberton and the Rand, or of working for diamonds in the Kimberley district; and the utter absence of any discovery in

* See Chapter xi.

the ruins in Rhodesia of any precious stones forces one to the conclusion that the ancients were not aware of the existence of the valuable gold and diamond fields south of the area as we have defined it in this chapter.

Possibly there existed a northern road through Hartley and Mazoe, in Mashonaland, and along the Pungwe, Busi, and Revue Rivers towards the coast. At the western end of such a line there is not the slightest evidence as yet of any such connecting ruins as would lead to the fixing of a line of road, but in the north-eastern parts of Mashonaland ruins and workings are so numerous that when these have been properly located and marked on the map one might probably judge whether a northern road existed. At present the probabilities are that it did exist, for the Pungwe, Revue, and Busi Rivers, which enter the sea above Sofala, would provide means of communication inland for some considerable distance from the coast. This probability is further strengthened by the position of the ruins in the Inyanga district, and beyond on the Portuguese plateau, which, it is obvious, could not well have been served by the southern route to Sofala. The Portuguese, in comparatively modern times, entered the Rhodesian portion of the country at the north-east of Mashonaland.

Sofala is the name given by old geographers to the seaboard or coast region lying between the Indian Ocean and the high plateau country of Sabia, or Monomotapa. The mediæval historians and geographers also describe this territory and portions of Monomotapa as Sabi, Sabae, or Saba, after the river to which are indiscriminately given these names, and which forms the natural outlet to the coast of the country once known as Monomotapa. Sofala in Arabic signifies a low country.

Sofala is also the name of the port on this coast, but whether the present town and harbour of Sofala actually occupies the exact site of the ancient port of that name is

a matter of uncertainty. Probably the old port occupied a position on Sofala Bay at some point more inland than the present town.

In 930 A.D. the Arabs were known to be established at Sofala. El Masudi (890–947) states that the Arabs of his time went habitually to that port to obtain gold and precious stones from the natives. Further, "Sofala is the termination of the voyages of the mariners of Oman and Shiraz. . . . It is a land abounding in gold, rich in wonderful things, and very fertile."*

In 900 A.D. the Arab writer Abuzeid-Hassan describes the land of Zendi in South-East Africa; Al-Biruni, in 1000 A.D., describes the commerce of Sofala; as also does Edrisi in 1150 A.D., mentioning that Sofala was a country of gold, and that gold in great abundance was exported. In 1250 Ibn Sayd also describes Sofala as a country of gold; in 1403 El Bakui and Abd-el-Rassai mention the gold trade of Sofala; in 1497 (25th November) Vasco da Gama anchored at Sofala and heard of the gold mines, and in 1505 a Portuguese expedition took possession of Sofala and made the country tributary to Portugal; in 1516 Duarte Barbosa described the gold mines of Monomotapa and the great trade carried on in gold; in 1630 Portuguese missionaries reported as to the state of the Christian churches in Monomotapa.

* The earliest writers frequently speak of Sofala and Monomotapa as "Lower Ethiopia," and of the inhabitants as "Ethiopians."

CHAPTER V

ANCIENT GOLD-MINING—OLD WORKINGS—ENORMOUS GOLD OUTPUT BY ANCIENTS—THEIR DISCONTINUANCE OF MINING OPERATIONS—WAS IT SUDDEN?—ANCIENT MINING A SOVEREIGN VENTURE.

EXCEPT in those parts of the gold-belts of Rhodesia where the lines of gold-reef do not show themselves conspicuously above the surface, as in the Bembesi district, where the reefs rarely outcrop, the gold areas are literally covered with lines of ancient workings more or less extensive, continuous, and well defined, and around these workings are still the dumps of quartz which the ancients left behind them.

Each of these old workings extends from fifty to two hundred yards in length, sometimes to as much as twelve hundred yards, as on the Killarney Mine, and fifteen hundred yards, as on the Surprise Mine. Their depth usually is from thirty to fifty feet, many have reached seventy feet, and some exceed one hundred and fifty feet. There are also many adits driven by the ancients into the sides of the hills to very considerable distances along the reef. On the Globe and Phœnix Mine there is an ancient incline adit, which the Portuguese miners evidently have extended. On the Bonsor Mine the ancient step-like workings up the face of the reef to the height of one hundred and twenty feet were commenced by the ancients, but extended by the Portuguese. The timber roofing, which remains good to this day, must have been erected by the Portuguese in the seventeenth century.

Diodorus, Strabo, Herodotus, Posidonius, and Pliny describe fully the mining operations of the ancients, especially of the Phœnicians who worked at Mount Pangæum, near Philippi, also between Suez and Mount Sinai for gold, in Spain for silver, in Scilly and Cornwall for tin, and so on in many countries of the world. Professor Rawlinson states that Job (xxviii. 1–11) also describes Phœnician mining. Both from history and from examination of the oldest known mines, we find that the ancients, certainly the Phœnicians, could sink shafts, drive adits, and, according to Pliny, support the roofs with timbering. Rhodesia is not the only country where the ancients, on reaching water-level, were prevented sinking deeper. The Archimedean screw was not invented till 220–190 B.C.

Of the 114,814 registered gold claims now current (September, 1900) in Rhodesia, considerably more than half have been pegged on the lines of ancient workings. Ancient workings have always been a guide to the prospector, and the best accredited mining engineers in Rhodesia, in their published official reports as to their companies' properties, make constant references to the ancient workings on their claims ; in fact, there are very few out of the more than four hundred properties dealt with by them in the latest *Report on Mining in Rhodesia* issued by the Chartered Company in August, 1900, in which reference is not made to the existence of ancient workings on their properties. So far does the fact of ancient workings being on a property enhance its value, that we find brokers advertise claims for sale as "with old workings."

Dr. Hans Sauer, president of the Rhodesia Chamber of Mines, said in 1899, "Our experience in this country now amounts to this, that, given a regular and extensive run of old workings on a block of claims, it is almost a certainty that a payable mine will be found on development of the ground." Mr. Walter Currie, M.E., also stated that his

"experience has invariably proved that where old workings exist, they indicate more or less accurately the length of the pay shoot below."

It is notorious that many of the most successful of Rhodesian propositions are those which have extensive ancient workings on their properties. This is but one of the many evidences that though the ancients extracted enormous quantities of gold from the reefs of this country, practically the more than overwhelming bulk of its great wealth lies to-day virgin and untouched.

New finds of ancient workings are still being made, and as the present known limits of the gold-belts are being in some directions extended with the knowledge gained by further prospecting work, so the area in which ancient workings are likely to be discovered is relatively increasing. The traces of some of these workings in some cases have been entirely obliterated by the subtropical rains. For illustration, slightly to the west of a line drawn from the Administrator's office in Bulawayo to the Public Library an ancient working on the outcrop of the reef was opened up to a depth of some ten feet or more for the inspection of geologists and antiquarians who were visiting Bulawayo at the time of the opening of the railway, which took place in 1897, at the commencement of the rainy season. Owing to there being higher ground in its vicinity, the heavy rains that season washed dirt into the excavation to such an extent that by June hardly a trace of the working was discernible, while to-day it is only to be found by first locating the untouched outcrop.

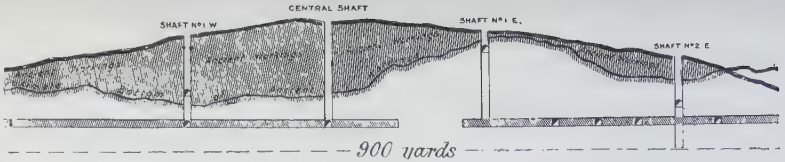
But the ancients did more than work on the quartz reefs. In Manicaland and parts of northern Mashonaland they washed for alluvial gold, while in many other parts of Rhodesia they washed for shed gold. Mr. John Hays Hammond, whose extensive experience of gold-mining in California, Transvaal Colony, Rhodesia, and other gold-

producing countries is indisputable, speaking in 1895 of Rhodesia, states: "As far as my examination extends, I could see no evidence of the existence of any alluvial or placer deposits; in fact, the topographical character of the country visited by me is such as to almost preclude the possibility of the occurrence of alluvial deposits of any extent or importance. This statement refers to those portions of Mashonaland and Matabeleland which I have examined, and excepts certain portions of Manicaland."

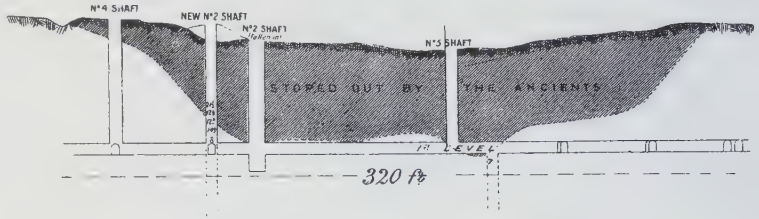
The evidences of the ancients having washed for alluvial and shed gold are as patent as those of their having attacked the quartz reefs. In the Umfuli and Mazoe districts one might ride tedious miles with evidences of ancient diggings for alluvial on every hand. In the Selukwe district is an area of some few square miles worked by them for shed gold. The same is noticed in Umnyati, near the Sovereign Reef, in Filabusi east of the Killarney Mine, and elsewhere, while the banks of numerous rivers demonstrate the points where the ancients washed for gold. To the present day, owing to the high rates of living and lack of native labour, little has, as yet, been done to prove that shed gold can be washed to pay.

Rhodesia is now rapidly and substantially demonstrating that its mineral wealth is simply stupendous, and that its gold-bearing areas will cause it to rank among the chief gold-producing countries of the world, and this notwithstanding all the gold the ancients took away, which is but the veriest fraction of its wealth.

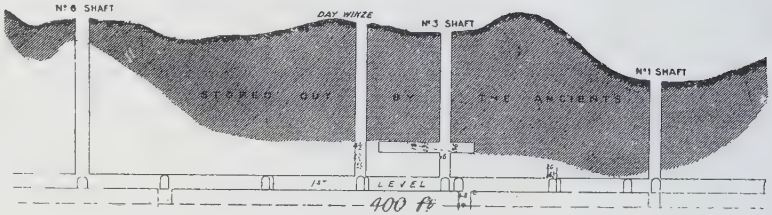
But when one considers the enormous amount of gold which must have been won by the ancients from the reefs in Rhodesia, one is fairly staggered with surprise. On a certain mine now crushing with a declared result of over 10 dwts. to the ton over the plates, and the tailings only estimated, are several ancient workings on the same reef, which is to-day being successfully worked, and these ancient workings



ANCIENT WORKINGS AT VERACITY GOLD MINE



EASTERN WORKINGS



WESTERN WORKINGS

ANCIENT WORKINGS AT AYRSHIRE GOLD MINE

are in size not above the average of those generally found. One chamber or length of one of these numerous workings on the property gives an astonishing result. Taking the length, breadth, and depth of the reef extracted by the ancients from this reef with the assay values of the reef untouched, disregarding altogether the possibility of the ancients having also worked rich leaders (and these are numerous on the property), and making liberal allowance for loss caused by crude methods of recovering gold, we find that the gold extracted from this one chamber out of many on the property was, in present-day value, not less than £32,000 sterling. Mr. Swan also calculates that the ancients took no less than one and a half million tons of ore from the old gold-workings at Mtopota, in western Mashonaland, alone. Mr. E. A. Maund, speaking of the ancient workings in the 'Inswezwe district, states that tens of thousands of slaves must have been employed to turn over the millions of tons of reefs in the ancient search for gold in that locality. If we considered the hundreds of square miles in several parts of Rhodesia which are covered with ancient workings, and the parts that contain workings of above the average length, continuity, and depth, and also the alluvial and shed-gold areas, we can safely arrive at a conclusion that gold to the value of at least very many scores of millions of English pounds sterling was won by the ancients from Rhodesia. Mr. J. Hays Hammond, in the early days of 1894 and after, as he admits, only partial examination of some few of our districts, expresses the opinion "that an enormous amount of gold has been obtained from these workings in the past is, however, unquestionable. Millions of pounds sterling worth of gold have undoubtedly been derived from these sources."

But the nature of the successive occupations of Monomotapa lends itself to a conclusion as to the vast amount of gold obtained here by the ancients. Be the apparently

strongly grounded hypotheses advanced as to the successive occupations of Rhodesia by Sabæo-Arabians and Phœnicians what they may, there is no disputing the fact that some of the temple forts had already been built eleven hundred years before the Christian era commenced, and the history of the Sabæo-Arabians, so far as research has revealed it, permits the view generally held, that these Himyaritic people were here long before 1100 B.C.

The Sabæo-Arabian (or Himyaritic) occupation was one of occupancy, and not one of settlement. These people came for gold, and not for the purpose of colonisation, as we understand it to-day. Their forts, some of which must have occupied several years in building, with their massive walls—some fifteen feet broad, their intricate entrances and other characteristics of their architecture—prove that this people considered protection to be of primal importance.

The permanent character of the buildings presupposes a permanently payable gold-recovery industry, and there is not lacking proof that gold-winning was the sole purpose of their presence in this country. Adding to these evidences of a long-period occupation by the Sabæo-Arabians, the fact that they built in the same style of architecture (of the first Zimbabwe period) as the Great Zimbabwe, numerous other large buildings also with temples in many distant parts of the country, we can safely conjecture that the Sabæo-Arabian (or Himyaritic) occupation must have extended over many centuries of time.

Practically the same may be said of the suggested Phœnician occupation, and, to a slighter extent, of the known later Arab occupation, each occupation covering centuries of time. At present we are only concerned with the peoples who lived in this country during any of the Zimbabwe periods, and considering the vast lapse of time between the first and last occupations by the ancients, and that the object of all successive occupations was gold, we may realise to a small

extent and very inadequately, the vast amount of gold which must have been won to have given cause for such a lengthened occupation among hostile natives.

Where else than Rhodesia did the ancient Sabæans obtain the main and principal portion of the vast supply of gold which they purveyed to Phœnicia, Rome, Egypt, and the rest of the then known world? The only answer possible at present is: Rhodesia; and the later discoveries in Rhodesia only serve to strengthen and emphasise this answer. And until those who may disagree with this conclusion find other arguments than those already advanced by them on which to strengthen their case—and the *onus probandi* now rests with them—the probability that Rhodesia was the main goldfields of these ancients can at any rate be tentatively, though not dogmatically, accepted.

Of the subsequent periods, viz. the transition or bastard period, and the still later Monomotapa times, followed by the period of late Arab influence (not occupation), and the modern occupation by the Portuguese, nothing now need be said, save that the Portuguese first visited Sofala in 1505; and in 1575, Lopeza writes that he was informed by the Arabs at that port that in normal times, when the industry was not hindered by native wars, the value of the gold exported from Monomotapa was two millions of meligaes every year (£500,000 in English money), and that this was taken in ships from Sofala, being also collected in small boats from adjacent ports and sent to India, Mecca, and other places.

There are numerous theories advanced to explain why the ancients ceased to further develop their workings on the gold-reefs, of which the following may be stated:—

1. That in many workings they got down to water, and this obstructed further development, as they possessed no hydraulic pump. Pliny, in describing the mining operations of the ancients and of the Phœnicians in other parts of the

world, states the water difficulty in some mines prevented sinking operations below certain levels.

2. The refractory character of the ore at lower levels probably made mining with primitive tools impossible.

3. Possibly the apparent "pinching out" of the reef caused them to desist, for working on our true fissure veins they would be altogether ignorant of the chief characteristic of fissure veins, viz. their liability to "pinch" and "open out," and improve at depth. But this "pinching out" theory could only have had a limited application.

4. That the ancients in all parts of the world appear to have been ignorant of what we understand as deep-level workings.

5. Some of the workings may have been abandoned by reason of the low-grade value of the ore in those particular spots. Yet these ancients worked on low-grade ores, for by official report we find that the reef in workings where they had done a considerable amount of work was of very low grade, while higher grades have been found in the vicinities, as, for example, Ancients-Burlington, low-grade; Bernheim, 6 dwts. 12 grains; Susie No. I South, 5 dwts.; Rowdy Boy, 4 dwts.; Northern Star, low grade, etc.

6. But perhaps the most cogent reason that actuated the ancients in discontinuing work was the rising of the native populations against them, as their tools, still lying at the bottoms of the workings, suggest their evident intention to return to work—the rising that many have conjectured was the final wiping out of the ancients by savage hordes, who drove them to their metropolis at Great Zimbabwe, where, it is alleged, they made their final stand before being driven out of the country.*

* Sir John Willoughby states: "At the bottom of some of these old workings earthenware panning dishes, still showing traces of gold, and rough implements have occasionally been found, which may perhaps be taken as evidence of a hasty evacuation. I therefore hold to the opinion that the ancient miners were swept away by a sudden and overwhelming tide of invasion, that ruined by one

Conclusive evidence exists that the abandonment by the ancients of many of their workings was of a sudden character. In some instances the ancients left the work on which they were engaged at the time of their leaving incomplete, and we find cakes of gold still remaining in the crucibles, quantities of gold, some in amalgam, some in smelted cakes, and the rest in valuable gold ornaments (independently of that which has been found in ancient burial-places). Their crushing-stones still have the small piles of quartz lying beside them, while on some of their dumps may be found quartz showing visible gold.

Again, when the reefs on some ancient workings were recently opened up to the point where the ancients had left off work, the assays of such reefs showed high values, proving that the ancients were satisfied with the reefs, especially seeing how in many instances they persistently worked low-grade ore.

That they were in most cases satisfied with their reef, the following few instances as illustrations taken from many of such notes made by mining men and published in the last Mining Reports issued by the British South Africa Company for Rhodesia will overwhelmingly demonstrate. We find from this official record that immediately where the ancients left off work on a reef it panned as follows: Maloney, 3 ozs. 3 dwts. to the ton; Morton Pinkney, 13 dwts.; July, 8 to 14 dwts.; Atlas, 17 dwts.; Susanna, 5 ozs. 8 dwts.; Le Tresor, 39 dwts.; Sabi, 16 dwts. to 1 oz.; Main, 9 dwts.; Standard, 14·66 dwts.; Juno, 2 ozs.; Edgar, 18 dwts.; Alliance, 11·1 dwts.; Vesuvius, 9·12 dwts.; Cumberland, 1 oz.; and on the Ayrshire, Chicago-Gaika, and Yankee-Doodle they left off while very rich quartz was being worked. Quartz from

fell swoop their then existing gold industry. There is no evidence of any revival of this industry having taken place before the recent British occupation of Mashonaland." Mr. Franklin White suggests that the ancients abandoned the country in the same manner as the Romans left Britain when their mother country was in the last stages of its existence. This opinion was also expressed by Mr. Selous.

ancient dumps has shown assays as follows: Leslie, 1 oz. to the ton; Canna, 26 dwts.; Bernheim, 6 dwts. to 17 dwts.; Queen's Prize, 58·42 dwts.; Urangwe, 15 dwts. These instances could be multiplied *ad nauseam.*

In connection with this branch of our subject there are two or three points worthy of consideration.

(*a*) Mr. J. Hays Hammond remarks: "It is not improbable, in fact the consensus of opinion is that these reefs have in most cases been worked at different periods." How far this opinion, which is borne out by that of many mining engineers, affects the question of the different periods of Zimbabwe architecture cannot at present be stated, but it affords a valuable clue for the archæologist to follow up.

(*b*) The ancients proved themselves to be most skilful metallurgists, and picked out rich shoots, patches, and pockets with marvellous cleverness, and in searching for these they were wont to disregard the ordinary quartz which was payable, and quartz from some of their old dumps which they discarded still pans 10, 16, and more dwts. of gold to the ton. In Rhodesia it is generally found that the footwall of the reef is the richest part, and in the majority of instances the ancients, where this has been the case, have taken down the footwall and left the hanging-wall of the reef untouched.

(*c*) The gold-mining industry of the early Zimbabwe periods appears to have been one sovereign venture, the undertaking of the home government of the Sabæo-Arabians and Phœnicians successively. History is very clear on this point so far as other ancient peoples are concerned. Slaves worked for their imperial masters without hire or reward, and it was not until the later days of Rome and Greece that hiring of slaves was known to be practised. Ancient mining in Rhodesia being a sovereign venture, may assist to explain the wonderful method shown in the distribution of the various Zimbabwes throughout the country. The ancients

are known to have worked extensively on low-grade ore, ore that to-day, with greatly improved facilities of mining and milling, is only just sufficiently payable to work. Unless the ancients had the forced labour of slaves, these low-grade reefs could not have been worked. The ancient slave-pits in Inyanga prove upon what a great scale slave-labour was employed, while the accounts given by Diodorus of the custom of the ancients to employ great gangs of slaves on the gold-workings in long, dark shafts, into which they descended for the precious ore, fits in exactly, and without exception, with the description of the ancient remains found on the gold-workings of Rhodesia to-day.

The following is an extract from an article by the late Mr. Telford Edwards, F.G.S., M.I.M.E., etc., who was one of the most prominent mining engineers in Rhodesia, on "Gold Production in Matabeleland," which appeared in the *Bulawayo Chronicle* on June 26th, 1897.

"To say that Rhodesia presents the most abundant and wonderful evidences of having been largely worked for gold by the people of a bygone age is an assertion which, I take it, would only be disputed by a person saturated with the insidious creed of the Little Englander, and who consequently hates the country and any favourable remark that might apply to it. At any rate, while the future gold-production of the country is still a problem of the future, it cannot be altogether unprofitable to consider its gold-production in the past.

"I think it would—from all information obtainable—be a fair thing to say that, for every ten square miles of Rhodesia there is one ancient working. Taking the area at 750,000 square miles, and taking into consideration the area and the number of the districts which are known to be more or less auriferous, it will, I should think, be readily conceded that 75,000 ancient workings (or old holes) exist in the country as a whole. Now I feel sure that to take

the average ancient working as representing an extraction of ore of a cubic contents of 50 ft. × 50 ft. × 3 ft. is a moderate and warrantable estimate. Again, at thirteen cubic feet to the ton (for ore *in situ*), this works out to nearly 577 tons—that is to say, every ancient stope represents 577 tons of ore extracted. Further, considering that the ancients worked the best parts of the outcrops of the veins only, it must be regarded as conservative to estimate every ton of ore mined by the ancients as being worth 10 dwts. per ton. Therefore, taking an old stope at an average size of 50 ft. × 50 ft. × 3 ft., and calling that an average extraction of 577 tons of ore, we have 43,275,000 tons of ore, which, at 10 dwts. per ton, is 21,637,500 ozs. of gold, which, at £3 10*s.* per oz., represents a value of £75,731,250.

"Considering that the ancients have invariably attacked the best portions of the veins, the estimate of 10 dwts. per ton is surely conservative, and it is also probable that the ancient workings have produced on an average much more than 577 tons of ore each.

"But while it is likely that the gold gone out of the country in the past vastly exceeds the foregoing figures, still we have excellent warranty for saying that that amount *at least* has gone, viz. £75,000,000 worth.

"Of course, a thousand and one arguments can be quickly advanced to show that any estimates as to what gold the country has produced in the past are quite valueless as to what it is likely to produce under the absolutely different conditions of the future, but putting for a moment on one side all the geological, economical, metallurgical, and other practical considerations which have to be duly weighed and viewed in an estimate of the future, it is surely a rather comforting reflection that what has been done before might be done again, and with all due deference to the enormous potentialities of the Randt, even £75,000,000 worth of gold *does* take a little getting."

[See Ancients and Copper Mines in Rhodesia, Appendix to this work.]

WEDZA OR BADEN-POWELL RUINS, SHOWING HERRING-BONE AND CHECK PATTERNS

Sketched by General Baden-Powell

NATIVE LABOURERS CLEARING OUT AN ANCIENT WORKING ON THE "B.P." REEF, FILABUSI

ANCIENT AND OLD WORKINGS* MENTIONED IN PUBLISHED REPORTS OF RHODESIAN GOLD-MINING ENGINEERS.

Agincourt Reef. Ancients abstracted rich shoots of gold. One working is 100 feet in length and 60 feet in depth. A second working is down to 21 feet, and reef carries 5 to 6 dwts.

Ancients-Burlington Reefs. Very extensive ancient workings, where ancients worked low-grade ore.

Atlas Reef. Line of ancient workings, bottomed at 60 feet on 17 dwts. reefs.

Amalanga Reef. Ancient workings, bottomed at 50 feet.

Alban-Oban group. Line of ancient workings.

Alliance Reef. Ancient workings, bottomed at 145 feet on reef averaging 11·1 dwts. on assay.

Arizona Reef. Large old workings on a payable reef.

Alice Mine. Extensive ancient workings.

Alaska and Hard Times Reefs. One of the largest ancient workings in Lomagundi district. Length 1,750 feet, width 150 feet. These show that ancients also worked for copper. Three ancient inclined shafts on this property.

Ayrshire Mine. Two very large ancient workings, 350 feet and 400 feet in length. Some very rich patches left by ancients.

Arctic Reef. Very large ancient workings.

Atlanta and Alabama. Very extensive ancient workings.

"*A*" *Reef.* Extensive old workings.

Antenior Mine. Very large ancient workings.

Australian Reef. Ancient workings.

Bill Sykes Reef. Outcrop vein worked by ancients.

Bon Accord Reef. Ancients worked this district for what may be termed "alluvial gold."

"*B.-P.*" *Mine.* Two large ancient workings.

Ben Nevis Reef. Ancients left pillars in workings which pan very rich gold.

* The expressions "ancient workings" and "old workings" are given as in the reports.

Butterfly Reef. Large old workings, reef at bottom going over 1 oz.

Battlefields Blocks. Remarkably large, extensive, and continuous ancient workings.

Bernheim Reef. Splendid line of extensive but narrow ancient workings. Two samples from ancient dumps yielded 6 dwts. 12 grs. and 17 dwts.

Beatrice Minc. Ancient workings.

Bonsor Mine. Large ancient workings.

Britannia Reef. Line of ancient workings.

Blue Spur Reef. Ancient workings.

Ben Lomond Reef. Ancient workings.

Bob's Luck Reef. Ancient workings, large.

Ben Ledi Reef. Ancient workings.

Ben Moor Reef. Ancient workings.

Blue Reef. Ancient workings.

Beit Reef. Ancient workings.

British United Reef. Ancient workings.

Blanket Reef. Ancient workings.

Cumberland Reef. Ancients left a footwall band of 22 inches right down to 80 feet. Assay value of section left, 1 oz.

City Reef. Ancient workings.

Canna Reef. Ancient workings, bottomed at 29 feet. Pannings from ancient dumps gave 26 dwts.

Currency Reef. Continuous line of deep and large ancient workings runs through these claims.

Chicago-Gaika Mine. Extensive and well-defined lines of ancient workings, with depths averaging from 30 feet to over 60 feet. Ancients appear to have worked over all the surface of this property and must have extracted a large amount of gold.

Coming Event Reef. Three distinct lines of extensive old workings.

Celtic Reef. Very large ancient workings, believed to be deep.

Copeman Reef. Ancient workings, numerous though apparently small.

Camperdown Mine. Ancient workings, extensive and numerous.

Criterion Mine. Ancient workings.

Confidence Mine. Ancient workings.

Critic Reef. Ancient workings.

Cloudy Day Reef. Ancient workings.

Dominion. Fairly large ancient workings.

Danga Reef. Line of ancient workings, bottomed at 100 feet.

Dumbleton Reef. Good line of old workings.

Defiance Mine. Two ancient workings, bottomed at 50 feet, where reef pans 14 dwts. of high-grade gold.

De Beers Reef. Two parallel lines of ancient workings.

Durham Reef (Tati). Ancients have cleared reef to 80 feet in depth.

Dick Reef. Ancient dumps show that ancients worked reef of value.

Duplex Reef. Large old workings.

"D." Reef. Fairly large workings.

Dobie Reef. Ancient workings.

Doel Reef. Ancient workings.

Dunraven Mine. Ancient workings.

East Olympus. Large old workings.

East Nicholson. Ancient workings.

Eaglebank Extension. Ancient workings extend almost throughout this property.

Eclipse Reef. Most extensive ancient workings, 900 feet long and 90 feet deep.

Early Morn. Ancient working, bottomed at 100 feet.

Eastern Queen Reef. Fine run of ancient workings.

Endopie Reef. Ancient workings, 40 feet deep.

Eagle Reef. Ancients left pillars in workings, quartz from which pan well.

Edgar Reef. Ancient workings of considerable size, 180 yards by 40 yards, with samples averaging 18 dwts.

Early Bird Reef. Ancient workings numerous.

Eiffel. Ancient workings.

Eileen Reef. Ancient workings.

Eagle-Hawk Reef. Ancient workings.

Find Reef. Mass of ancient workings, some visible gold quartz on ancient dumps.

Fred's Luck Reef. Old workings.

Fiery Cross Reef. Ancient workings.

Good Hope Reef. Two separate reefs worked by ancients.

Geelong Mine. Ancient workings, 108 feet deep.

Gertie Reef. Ancient workings, varying in length from 800 feet to 1,200 feet.

Golden Valley Reef. Ancient workings, not numerous but deep.

Grand Manica Reef. Two lines of ancient workings.

Guinea Fowl Reef. Ancient workings on valuable reef.

Germania Reef. Ancient workings, extensive.

Golden Vein Reef. Ancient workings, fairly extensive.

Grace Darling Reef. Ancient workings, of fair extent.

Golconda Reef. Large ancient workings.

Gaika Reef. Ancient workings.

Globe and Phœnix Mine. Ancient workings.

Glandore Reef. Large ancient workings.

Good Luck. Ancient workings.

Golden Butterfly Reef. Ancient workings.

Hibernia Mine. Numerous ancient workings.

Harvester Reef. Extensive ancient workings.

Harold Reef. Very large ancient workings.

Hard Times Reef. Ancient workings, 1,700 feet long and 150 feet wide.

Howard Reef. Large ancient workings, footwall of reef taken only.

Home Rule. Ancient workings, extensive.

Impimbi Reef. Ancient workings.

Imani Mine. Ancients have worked valuable quartz.

Intaba Reef. Line of ancient workings.

Ingondoma Reef. Very extensive ancient workings.

Ilex Reef. Ancient workings.

Iron Mask Reef. Ancient workings.

Inez Reef. Ancient workings.

Invicta Reef. Ancient workings.

July Reef. Ancient workings extend for 700 feet without break. Three samples from ancient dumps panned 8 to 14 dwts.

Jackall Mine. Twenty-five ancient workings.

Juno Reef. Reef left in ancient workings pans 2 ozs.

Jumbo Reef. Extensive ancient workings.

June Bug Reef. Ancient workings.

Jenny Reef. Ancient workings.

Killarney Mine. Ancient workings, one being 1,200 yards in length.

Kaka Reef. Exceptionally fine run of ancient workings.

Kimberley Reef. Large and deep ancient workings, extending in an unbroken line for 1,400 feet.

Kameel. Extensive old ancient workings.

Kingston Reef. Ancient workings.

Kaiser Reef. Ancient workings.

King Solomon's Reef. Ancient workings.

Leslie Reef. Line of deep and large ancient workings. Ancient dumps pan richly.

Lady Midas Mine. Ancient workings. Ancient dumps show visible gold quartz.

Leopard Reef. Old workings.

London Reef. Line of important ancient workings.

Lily Reef. Two parallel lines of ancient workings, each extending 500 feet.

Le Trésor Reef. Old incline shaft (50 feet). One stone on dump gave 39 dwts.

Leechdale Reef. Ancient workings.

Lizzie Reef. Old workings on reef panning well.

Last Chance Reef. Old workings.

Lady Reef. Ancient workings.

Little Wanderer Reef. Ancient workings.

Left Bower Reef. Ancient workings.

Lion Reef. Ancient workings.

Mac a Mac Reef. Good line of ancient workings, with good results from ancient dumps.

Maloney Reef. Bottom of one ancient working showed reef assaying 3 ozs. 3 dwts.

Morton Pinkney Reef. Large, well-defined ancient working, with reef assaying 13 dwts.

Mabami Reef. Fairly good run of ancient workings.

Marmion Reef. Extensive ancient workings.

Mako Koshla Reef. Ancient workings.

Mazeppa Reef. Ancient workings.

Moonie Reef. Ancient workings.

Mystery Reef. Almost 4,000 feet of deep ancient workings on a highly payable ore. These are the first ancient workings located in this country under a concession from King Lo 'Bengula before the white occupation. Considered amongst the finest ancient workings in the country.

Morven Mine. Ancients worked to a depth of 100 feet.

Main Reef. Portion of reef left by ancients pans 9 dwts.

Maida Vale Reef. Ancient workings.

Monarch South (*Tati*). Well-defined and continuous ancient workings.

Mount Cromwell Reef. Ancient workings numerous.

Moor Reef. Large old workings.

Mantana Reef. Ancients worked extensively on good reef.

Montgomery Reef. Large number of old workings.

Matabele Mint Reef. Ancient workings.

Matabele Sheba Mine. Ancient workings.

Monti Reef. Ancient workings.

Mayo Reef. Ancient workings.

Mount Morgan Reef. Ancient workings.

Maguatsie Reef. Ancient workings.

Matchless Reef. Ancient workings.

Mapondera Reef. Ancient workings.

Nellie and Pioneer Mine. Ancient workings, one being 61 feet deep.

Nelly Reef. Large number of deep and extensive ancient workings on uncommonly rich ore.

North Bonsor Mine. Old workings, some much deeper than 50 feet.

Niger Block. Line of ancient workings.

Namaqua Reef. Ancient workings, varying in length from 800 feet to 1,200 feet.

Northern Star Reef. Ancients worked quartz of low grade.

Nonpareil Reef. Ancient workings, fairly continuous. Ancients abandoned these, but reef is very good, and visible gold quartz on dump.

Nantwich Reef. Large old workings.

Nautch Girl Reef. Ancient workings.

Nordenfelt Reef. Ancient workings.

Northumberland Reef. Ancient workings.

Omega Reef. Ancient workings, numerous. Ancients worked small payable seams.

Old Nick Reef. Ancient workings, extensive.

Olympus Reef. Ancient workings.

Peregrine Reef. Ancient workings, on very satisfactory reef.

Pearl Reef. Old workings.

Prince Block. Extensive and deep ancient workings.

Primrose Reef. Very fine line of old workings. Ancients have removed over 20,000 tons of ore from this property.

Pioneer Reef. Ancient workings.

Paradox Reef. Ancient workings.

Queen's Prize Reef. Old workings are large, deep, continuous, and numerous. Rich quartz still lies about dumps. Parts of reef left untouched assayed 58·42 dwts.

Royal Somerset Reef. Continuous and extensive ancient workings.

Rachel Reef. Old workings.

Rock Reef. Ancient workings are extensive and continuous, and quartz from ancient dumps pans well.

Red Willow Reef. Two lines of old workings.

Rose of Sharon Reefs. Extensive ancient workings.

Red Knight Reef. Ancient workings.

Rowdy Boy Reef. Ancient workings run from end to end of this property. In one working ancients had worked on a 4 dwt. reef.

Rezende Mine. Ancient excavations and drives.

Red Rose Reef. Ancient workings.

Right Bower Reef. Ancient workings.

Rhodes Reef. Ancient workings.

Robinson Reef. Ancient workings.

Susanna Reef. Ancient working, from which rich quartz has been extracted. The pillar left in this stope showed a reef assaying 5 ozs. 8 dwts. Driving through this stope has disclosed solid reef panning nearly 10 ozs. to the ton.

Sam Reef. Ancient workings, extensive and continuous, and quartz from ancient dumps pans well.

Sabi (East) Reef. Ancient workings. Some samples from ancient dumps gave 16 dwts.

Sabi (Main) Reef. Ancient workings extend 700 feet and 900 feet. Ancient débris quartz gave 17 dwts.

Sabi (Middle) Reef. Extensive ancient workings. Some ancient débris quartz assayed 26 dwts.

Sabi (West) Reef. Ancient workings, 600 feet in length. Some quartz from ancient dumps gave assays of 1 oz., also low returns.

Speculator Reef. Fairly large ancient workings, with payable gold quartz left on dumps.

Surprise Mine. Ancient workings, large and extensive.

Scouts Reef. Ancients worked very extensively throughout the length of this property.

Shamrock Reef. Extensive ancient workings.

Satiety Reef. Good line of old workings.

Sintae Reef. Broad ancient workings, with high dumps.

Sidney Reef. Ancient workings.

Susie Reef. Ancient workings.

Skitawarbo Reef. Large and deep ancient workings. Ancients' dumps pan well.

Southern Star Reef. Ancients have worked this property for shed gold.

Standard Blocks. Continuous line of deep old workings, on reef yielding, over plates only, 14·66 dwts.

St. Kilda Reef (Tati). Ancient workings, extensive.

Seduline Reef. Large old workings.

Sovereign Reef. Large and extensive old workings.

Sebakwe Reef. Ancient workings, extensive and numerous.

Sussex Reef. Ancient workings.

Superb Reef. Ancient workings.

Stanley Reef. Ancient workings.

Simona Reef. Ancient workings.

Sunbeam Reef. Ancient workings.

Tuli Reef. Large and extensive ancient workings.

Tyne Blocks. Ancient workings.

Tuli River Reef. Good run of large old workings.

Tiger Reef. Ancient workings, on a reef assaying over 8 dwts.

Tebekwe Mine. Ancient workings.

Tuli River Reef. Ancient workings.

Umfasi Reef. Old workings.

Umyooka Reef. Ancient workings on fifty-five claims.

United Kingdom Reef. Ancients have extracted a considerable quantity of gold from numerous and large old workings.

Unknown Reef. Well-defined ancient workings, on valuable reef.

Urangwe Reef. Some of the most extensive old workings in Rhodesia, running through five blocks (fifty claims), 2,500 yards. Ancient dumps showed pannings from 4 to 15 dwts.

Umtali River Reef. Ancient workings.

Umlimo Reef. Ancient workings.

Umchabesi Reef. Ancient workings.

Veracity Reef. Ancient workings extend in a line for 1,500 feet, greatest depth 90 feet.

Victoria Block. Ancient workings.

Vesuvius Reef. Most extensive ancient workings, considered among the largest yet discovered. One sample from ancient dumps gave 9·12 dwts.

Vermaaks South (*Tati*). Ancient workings run throughout this property.

Vulture Reef. Ancient workings.

Waterway Reef. Old workings.

Washington Reef. Ancient workings, extensive.

Windfall Reef. Ancient workings, numerous.

Wheel of Fortune. Ancient workings, fairly extensive.

White Rose Mine. Ancient workings.

Wanderers' Rest. Ancient workings.
West Nicholson Mine. Ancient workings.
Yankee-Doodle Mine. Very considerable ancient workings.
Yankee Girl Reef. Ancient workings.
Yellow Jacket Reef. Ancient workings.
Zephyr Reef. Ancient workings.
Zenobia Reef. Two old workings.
Zehana Reef. Old workings. Reef panning 12 dwts., some pannings running far higher.

[The above list does not include a tithe of the gold-reefs in Rhodesia with ancient workings which might be mentioned with similar remarks.]

CHAPTER VI

ANCIENT GOLD-CRUSHING AND GOLD-SMELTING—ANCIENT MORTAR-HOLES, CRUSHING-STONES CRUCIBLES, AND FURNACES

SO far as careful investigations of the ruins of Rhodesia have been made, there seems to be no doubt that the ancients invariably crushed the gold quartz at the nearest water to their workings on the reef, and not at any of the ruins. No single trace has, during five years' exploration, been discovered of the ancients having crushed for gold at any one of the major ruins which form the capital towns of districts, nor at any one of the minor ruins which protected and served as bases for the workers in the sub-districts.

In no ruin, so far discovered, have the ancient mortars, or crushing-stones, or even gold quartz been discovered. But at the side of almost every river which passes in the vicinity of ancient workings, in any district throughout the country, and also along old river-beds from which the course of the river has been changed, may be found hundreds of mortar-holes bored into the level portions of the tops of the granite, diorite, or basaltic rocks along its banks, and often on prominent boulders in the river itself. Many hundreds of these holes will be found at one spot, frequently in batches of ten in two rows of five each. At one point on the Gwelo River there are not less than six hundred of such holes.

These mortar-holes vary in size from 8 inches in depth to 20 inches, and from 6 to 8 inches in diameter. To-day they still contain pieces of partially pounded quartz, and pannings

of the soil in some cases have given good results, the holes having been filled up with silted matter, and round these holes can be still seen the splinters of quartz which flew from under the pestles and some of which show visible gold.

Alongside these mortar-holes are to be found large numbers of shallow hollows on the rocks where the quartz powdered in the mortar-holes was evidently reduced to the fineness required for washing. These depressions on the rocks are very numerous, and some of them have been used for grinding the quartz powder to such an extent that in course of time they became too deep for the round stone-crusher to work in them, and immediately alongside them can be seen newer crushing-holes.

The ancients also used large granite or diorite stones on which to crush. These can be distinguished from the ordinary Kaffir corn crushing-stones, though many of such stones used by the ancients have been used by the Kaffirs for grinding corn, and have been carried off from the workings to their kraals.

The ancient crushing-stones are often found with small piles of quartz still lying beside them, and frequently little specks of gold may be discerned in the roughness of the surface of the depressions, and also on the round ball crushers. The ancient crushers are also mainly to be found near water or workings, and are generally in large numbers, as many as a hundred having been found together, for instance, as at the Sovereign Reef, Umnyati. The round ball crushers are usually water-worn granite or diorite stones found in rivers.

At one spot near the Yellow Jacket Reef, in Mazoe, a ring of one hundred and fifty or more of these ancient crushing-stones was found with quartz lying beside each. Evidently the ancient toilers had sought the shade of a clump of trees to protect themselves from the heat of the sun.

One of the best illustrations of the evidences of the work of the ancients on the gold-reefs may be seen about one and

a half miles north of Maponderi's Kraal, in the Mazoe district. The spot alluded to is also four miles north of Inderi, or Water Hill—a dome-shaped kopje eight hundred feet in height—and is about half a mile wide, and lying between two creeks running north and emptying into another creek running east into the Mazoe River. This ground is covered with claims now belonging to the De Beers Syndicate. Here are to be found over two thousand quartz crushing-stones placed in oval rings, with heaps of quartz débris in the centre of each, which might at first sight be taken for ant-hills. Some of the splinters from these heaps show visible gold. The whole surface of this area is covered with tailings to a depth of from twelve to eighteen inches. The heaps are about four feet high, and very extensive, and must once have been considerably larger, the rains having washed them to their present level. Some pannings from these tailings showed over half an ounce of gold per ton.

To see the methods of crushing used by the ancients we must examine the paintings representing this industry which are depicted on Egyptian tombs, and to learn still more concerning them we must consult the works of the scrupulously correct Roman historian, Diodorus, who wrote about 44 B.C. The closer these inquiries are made the more is greater semblance noticed between the ancients' methods as seen to-day on every hand in Rhodesia and the ancients' methods elsewhere, while much that has appeared inexplicable becomes easily and clearly understood.

Frequently slabs of soapstone, with a number of small and shallow holes cut into them, sometimes on both sides, are being discovered, and many have asserted that in some indefinite way, never explained, they were connected with ancient gold-working, and thought to be some article used in gold-smelting. Some of these slabs are undoubtedly ancient, some also are of the Kaffir, Monomotapa, and Mombo periods, while others are quite modern. Their age can be

judged by the number of holes, and also by marks of tools in the holes being present or completely worn away. These are Isafuba game stones, and closely resemble the Pullangpoly of India, a game played with the counters or balls after the style of "Fox and Goose," or "Solitaire"; but in India and with the Makalangas the moves require considerable mathematical calculation. This game is also played with holes made in a clay floor, or on the open ground.

Doubtless the game was brought over during the Zimbabwe periods, when the Sabæans, and after them the Phœnicians, monopolised the trade with Africa and India. The old stones have as many as fifty holes in them, those of the Kaffir-Monomotapa period a few less, those of the present Makalanga have again still less, while other African tribes have a poor imitation with only a very few holes. This is the game principally of the old Makalanga, a people who in their former semi-civilised state were the dominant and most cultured of all South African tribes, and who were always noted for their skill in mathematics, evidently acquired from the Semitic gold-workers, and who to-day among native tribes still retain the pre-eminence in matters requiring any calculation.

But to return to the ancient gold-workers. We have noticed that all crushing and washing operations were conducted in the sub-districts in the neighbourhood of the water nearest to the workings. The gold-dust thus washed for would naturally be temporarily stored in the fort which protected the workings in that particular sub-district till a certain quantity had been accumulated, when it would be removed to the capital town of the main district of which the sub-district formed part, where alone are distinct traces of gold-smelting operations. It is in the capital towns only that furnaces and crucibles are to be found, all the minor ruins representing the protecting forts of sub-districts being absolutely without the slightest trace of gold-smelting operations.

This use of the capital towns as centres for smelting the gold from all its sub-districts is confirmed by the discovery in capital towns of raw gold of several distinct standard qualities that would not very probably have been obtained together from the workings of one sub-district. Probably not all the gold was smelted, for some was taken in dust form to the coast, for small quantities of gold-dust can be found in the road-protecting forts far from all gold-workings and without evidences of smelting operations. This must have been lost in course of transit. Traces of gold-dust are to be met with in most ruins.

Each of the capital towns would contribute its quota of smelted gold and gold-dust to the metropolis at Zimbabwe, where it would be stored. A considerable portion would be retained for local manufacture, for at Zimbabwe, during all the Zimbabwe periods, an extensive industry of manufacture of gold ornaments, jewellery and plating is known to have been carried on, and the rest would be retained till some caravan set out for Sofala on the coast.

Take, for instance, a few of the many capital towns, such as—

Dhlo-dhlo, for Upper Insiza,
Umnukwana, for South Belingwe,
Tuli, for Gwanda,
Tati, for Macloutsie and Shashi,
M'Tendele, for Sabi,
Thabas Imamba, or M'Telegwa, for Lower Shanghani,
Khami, for Bulawayo district,

each of which capital towns is surrounded by gold-reef districts, near which are numerous minor ruins of protecting forts extending near and far over an area of some miles from the capital town, and altogether distinct from the sets or rings of minor ruins surrounding other capital towns.

In transporting the gold from the capital towns to the metropolis, the caravans would necessarily have to pass

through districts where there are no gold-reefs, and a glance at the most recent map of Rhodesia shows there are many such districts between some of the capital towns and Zimbabwe, and on these areas we find located, far away from any gold district, forts not protecting gold sub-districts, but occupying strategic positions of strength on heights of kopjes, overlooking drifts and commanding neks. These were evidently "posting stations," at which the gold-laden caravans rested or sought protection from hostile natives on the journey to Zimbabwe or towards Sofala. The peculiarity of this class of fort, as distinguished from the forts protecting sub-districts, is that in these road-protecting forts there has never been the slightest trace of gold, except an infinitesimal quantity of gold-dust, which might, from time to time, have become lost in course of transit. There are no signs of these forts having been occupied to the extent that the sub-district forts were occupied. The finds also are comparatively nil.

The ancient gold-smelting furnaces, so far as yet discovered, may be recognised by the following features :—

1. These are sunk into the floor and not built upwards from the floor.

2. The furnace blow-pipes are made of the finest granite powder cement.

3. The presence of gold splashes on the nozzles of the blow-pipes and on the layers of coatings in the furnaces; of numberless pellets of gold lying about the furnace and evidently spilt liquid gold, and of the flat cupel with gold showing in the flux.

But before dealing with these ancient gold-smelting furnaces, it may be well to dispose of four misstatements regarding these furnaces which have been repeatedly published as facts.

(*a*) Visitors to ancient ruins have frequently brought away what they state to be "portions of ancient furnaces." These

portions are of red or yellow clay, which have been subjected to such great heat as to have made them resemble in appearance, hardness, and weight pieces of stone, the segments apparently of a furnace. These pieces are generally found on the surface of the present earth-floor inside the ruins, or are discovered at a depth of not more than one foot from the surface. These segments bear the impress of wood supports having been used in their construction. The furnaces from which these segments have been taken belong either to the Makalanga iron or copper workers of modern days or else to the Barotsi, who are celebrated for their artistic copper and iron work, who occupied Matabeleland for a considerable time before they crossed northwards over the Zambesi and settled in what is now known as Barotseland. In construction and material they are identical with those used to-day by the Makalanga and Barotsi. These furnaces which are so found in the ruins are sprinkled with iron and copper slag, while iron and copper slag and ores, pieces of molten iron and copper, ashes, and charcoal are always to be found near them. Taking into consideration the conditions in which the charcoal is found, the stage of its decomposition, or preservation, may be some guide in roughly fixing relative periods of age; and the charcoal in and about these iron- and copper-smelting furnaces is altogether modern. It must be borne in mind that while the ancients sank their furnaces into the floor, the Makalanga and Barotsi built their furnaces rising from the floor.

(*b*) Dr. Schlichter, who has done so much to elucidate the mystery of the ancient ruins in Rhodesia, falls into one error with regard to gold-smelting furnaces at Dhlo-dhlo (which, by the way, he wrongly calls Mombo ruins, the Mombo ruins being at Thaba Imamba, where King Mombo was skinned alive by the Amaswazis), when he says he discovered in the Central Ruin furnaces, portions of blow-pipes, and crucibles, "which can leave no doubt that gold-production was the object

of the furnaces just described." These furnaces have since been carefully examined, and there is no trace of their having been used for gold-smelting. They are comparatively modern, and were used for smelting copper and iron, copper and iron slag and molten metal still lying in and about them. These furnaces and the blow-pipes are not "made of the same cement as the platform," but of a coarser material, as in all Makalanga and Barotsi furnaces. At present no traces of gold-smelting furnaces or gold crucibles have been discovered at Dhlo-dhlo, notwithstanding several months' exploration of these ruins by Messrs. Neal and Johnson subsequently to Dr. Schlichter's visit. It is highly probable that when the lower and original floors are opened out, gold-smelting furnaces will be found.

(*c*) Mr. Bent states that at Zimbabwe, on a certain débris pile which he locates, he found "rejected casings from which the gold-bearing quartz had been extracted after being subjected to heat prior to crushing." Later examination has shown that most probably these casings are the angular portions of the comparatively modern iron-smelting furnaces of the Makalanga, who for centuries carried on an extensive iron industry in and near the ruins, but undoubtedly they were not used for the purpose stated by Mr. Bent. No gold quartz has, so far, been found in any ruins.

(*d*) On page 220 of Mr. Bent's work are illustrations of what he terms "bevelled edges of gold-smelting furnace." In all ancient gold-smelting furnaces so far discovered there is absolutely no part of the furnace that could have bevelled edges, seeing that the furnaces are sunk into the floors and not built upwards from them. Mr. Bent, in those early days of exploration of Rhodesian ruins, might have been unaware that in almost all Zimbabwes the whole of the spaces within the inclosures were floored with a fine quality of cement made of powdered granite, as used in the floorings and stairways of the ancient ruins. Round the base of the walls of

each interior building this flooring was terminated by a bevelled edge exactly similar to the illustration given in Mr. Bent's book, and these edges, always bevelled, acted in the same way as the skirting-board in modern rooms, except that these edges were outside the building instead of being inside. These edges protruded from the walls about three inches,* but sometimes even to sixteen inches.

We have stated that the ancient gold-smelting furnaces, so far as they have yet been discovered, are not found on the present floors of the ruins, but on the original floors, which in some instances are many feet below the cemented floors as seen to-day. But at the Mundie Ruins, which are described later, where five gold-smelting furnaces have been discovered, the furnaces are on the present level, for the most interesting fact concerning the Mundie Ruins is that these ruins, unlike all Zimbabwes so far discovered, have never been reoccupied and filled in, and the original floor still remains the present floor.

The materials used in the gold-smelting furnaces do not serve as an absolute guide in identifying these furnaces, except when one examines the cement, for the best and finest granite powder cement was used, and this was smoothed and polished in splendid workmanlike style by the ancients. As time passed the later occupiers of the ruins ceased making the superior class of cement, and they neither smoothed nor polished it, or at least they only did so in a very rude fashion. The Makalangas, who still to-day retain the art of working in metals, which they acquired from the occupiers of the Zimbabwes, have in several respects followed on the lines of the ancients, and also used powdered granite in making their blow-pipes, but not of the highest quality.

The flux remaining on a crucible used by the ancients will always demonstrate its purpose, whether for copper or gold-smelting. In the latter case the flux is of a greenish-blue

* See "Drains," Chapter xii.

colour, and is usually thickly studded with specks of gold, while in some instances the cakes of gold have been found remaining in the crucibles, while in the copper crucibles the copper can still be seen in the flux.

All the ancient gold-smelting furnaces are merely round holes sunk basinlike into the lower and original floors, and are lined round inside with ancient cement of superior quality. These holes are about twelve inches in diameter and have an original depth in the centre of twelve inches. The linings are thickly covered with specks of gold, which have evidently been spurted from the crucibles. When the first lining became worn by the heat, a fresh lining was smeared round inside on the top of the old lining, and this in turn also became covered with specks of gold. This process was repeated several times till the depth was so reduced as to render the furnace useless. Taking a section of such linings, one can to-day with a knife split the several linings apart, and see on the inside face of each lining gold splashes in abundance.

These ancient gold-smelting furnaces have no chimneys, in fact, the plan of their construction does not appear to allow of chimneys being fixed to them.

Bits of the charcoal used in the fire into which the crucibles were thrust were discovered still remaining in the furnaces.

The five gold-smelting furnaces at the Mundie Ruins in the Belingwe district are sunk into the original floor in the centre of the building in two rows, each furnace being distant about three feet from any other. At Khami, which was a capital town, crucibles have been found, all showing gold in the flux, but no furnaces. These ruins have only been very partially explored. This applies to a great many ruins of capital towns where gold crucibles and blow-pipes are most plentiful, but until the lower and original floors are opened up the furnaces will not be discovered, though their presence is almost a certainty.

Some of the blow-pipes, portions of which are plentifully found in the old débris heaps at all capital town ruins, still have on their nozzles splashes of gold, which must have spurted out from the shallow crucibles used by the ancients. These blow-pipes are about ten inches in length, the larger end, into which the mouth of the bellows was placed, being three inches in diameter, while the smaller end tapers down to a diameter of half an inch. The Makalanga iron-workers of to-day follow very closely, both in pattern and material, the blow-pipe model of the ancients.

The scarcity of ancient blow-pipes, in comparison to the number of ancient crucibles discovered, is explained by the fact that present native metal-smiths have frequently been found using ancient blow-pipes, as they were saved to some extent the trouble of making them.

The crucibles of the ancients are very shallow, and range in size from two to eight inches in diameter. These were made of granite and granite cement. Almost every ancient crucible shows gold visible in the flux. Some deeper crucibles found, which resemble more the pattern used in the gold-smelting operations of to-day, may be concluded as used during periods later than those of Zimbabwe. One ancient gold crucible discovered shows the marks of the pincers used to take it out of the furnace. The flux on the edges was depressed while it was in a molten state, and the gold in the flux shows how it was blunted by the tongs of the pincers.

Outside the main walls of almost every capital town ruins are to be found, débris heaps full of portions of ancient gold crucibles and blow-pipes. From their positions these must have been thrown over the tops of the walls, and pieces of them still remain fixed in the joints of the masonry and on the broad-surfaced tops of the walls, just where they were thrown in the old days.

The tools of the ancient gold-workers so far discovered include a small soapstone gold-beater's hammer and burnish-

ing stones of water-worn rock, with gold still adhering to them. An ingot mould was discovered at Zimbabwe by Mr. Bent, and is described by him (pp. 216, 219). Mr. Bent also stated he discovered near the smelting furnace at Zimbabwe pincers and several iron tools, but was unable to say confidently that these belonged to the Zimbabwe periods. Much has been written concerning the possible Phœnician origin of this ingot mould. Four years ago so many supposed "ingots" were reported to have been found in different parts of the country, all of which were shown to be anything but genuine ingots, that the mention of the name "ingot" has since been discreetly allowed to drop.*

One strikingly noticeable feature with regard to ancient gold-working is the apparent waste by the ancients of the precious metal. We do not refer to the vast wealth interred with their dead, nor to the frequent discovery of very valuable gold ornaments on the original floors of their buildings, but the waste exhibited in their smelting operations. The rejected linings of their furnaces are smothered with gold spurted out from the crucibles. The crucibles are thickly covered with gold, and small cakes of gold can still be found in them. Gold in a molten state has frequently been found in goodly quantities in the form of pellets as large as buck shot all about the vicinity of the furnaces, and also thrown away on to the débris heaps outside the buildings.

* See Mr. Selous' statement, that identical ingot moulds to that found by Mr. Bent are to be met with in Katanga district (see "Industries," Chap. x.).

CHAPTER VII

THE ANCIENT GOLDSMITHS

Over 2,000 ozs. of ancient gold ornaments discovered — Gold wire drawing—Gold beads—Beaten gold—Gold nails and tacks—Gold plating—Goldsmiths' tools.

THERE are indubitable evidences in the finds made in opening up the original floors of the builders of the ancient ruins, that these ancients, at any rate those of the earlier Zimbabwe periods, carried on at the major or capital town ruins an extensive industry in the manufacture of gold ornaments and articles of use.

We advisedly say the earliest ancients were pre-eminently workers in gold and clever in ornamental metallurgy, while the ancients of later times, to some extent, were also good smiths. In Chapter xii., in stating some of the arguments in support of the statement that there were distinct and succeeding periods of Zimbabwe architecture and construction, it is shown that the more solid and massive gold ornaments and articles are only found on the original floors of buildings of the earliest Zimbabwe period. These are here found in the greatest profusion, further evidencing, as stated in Chapter vi., the apparent disregard by the earliest settlers of the full value of the precious metal.

But the ancients who erected the second-period buildings, and who also reoccupied the buildings of the first period, but only on higher and later levels of floors, did not, so far as it can be gathered from the character and amount of finds in

their Zimbabwes, appear to have had in their possession many gold ornaments, though these are sometimes found. Small gold beads seem to have been their chief class of gold ornament, while copper and iron bangles, with bands or beads of gold at intervals, evidently sufficed for their personal adornment, for in second-period buildings little or no massive gold work has so far been discovered.

The presumption, and a fair one, would appear to be that with the ancients of the second period, whether they were the Phœnician settlers who are suggested as having occupied this country subsequently to its suggested occupation by the Sabæo-Arabians, or not, a closer commercial intercourse existed between them and the Phœnicians, who became, after the passing of the Sabæo-Arabian influence, the mercantile marine carriers of the world, developing to an enormous extent trade with all parts of the then known world, which premier position among the nations they held for, at least, one thousand years.

History shows these Phœnicians to have been the gold purveyors to the world, and no doubt these gold merchants would increase the already existing facilities of trading with this country, especially as there was some kinship between them and the Semitic occupiers. Scripture states that the Phœnician cities of Tyre and Sidon were enormously rich in gold, while history is replete with assertions as to the notorious wealth of the numerous Phœnician colonies on the Mediterranean coasts. It can therefore be inferred that with a large market and demand for gold, the Phœnicians would open up a trade with the occupiers of this country, seeing that they voyaged to more distant parts and that the existence of this gold-bearing country must have been known to them. The ancients of this period being, consequently, in a better position to dispose of their gold-dust, less would be used in the local manufacture of gold work. It may be interesting to note that the gold supplied from

GOLD ORNAMENTS AND POTTERY DISCOVERED AT DHLO-DHLO
AND M'TELEGWA RUINS

"Ophir" by Hiram was obtained at a period subsequently to that of the Sabæo-Arabian influence.

Whether the above suggestions actually account for the few finds of gold ornaments in the Zimbabwes of the second period as compared to the solid and massive gold work so profusely found in the first-period buildings, is a question that antiquarians and archæologists alone can solve.

Large quantities of solid gold ornaments and cakes of gold have at different times been discovered in the ancient ruins of Rhodesia. For instance, about 500 ozs. have been found by Messrs. Neal and Johnson during explorations under the grant from the British South Africa Company to examine all ancient ruins south of the Zambesi; 600 ozs. were found by Mr. Burnham; 208 ozs. were found in 1895 by Messrs. Neal, Johnson, F. Leech, and J. Campbell, and many smaller quantities, varying from a few beads up to 60 ozs., have been from time to time discovered by prospectors, who, while working on the claims, have devoted an occasional off-day to fossicking in some ruin which might happen to be in their immediate neighbourhood, while others have made, without legal authority, a business of digging in the ruins for gold.

It would be no exaggeration to state that at least 2,000 ozs., if not very considerably more, of ancient gold ornaments have been taken from these ruins during the last five years in Matabeleland alone, the greater portion of which was of a higher standard value than that of a British sovereign. This represents a sum of £7,500 sterling, but a great part of such finds realised on sale between three and a hundred times their gold value, owing to the intrinsic value of the finds as ancient relics.

Notwithstanding this amount of gold ornaments which is known to have been discovered in Matabeleland, the five hundred ruins in Rhodesia, so far as "finds" of gold ornaments are concerned, remain practically virgin sources of buried gold,

the richest being, as extensive experience has proved, those ruins which belong to the first period of Zimbabwe architecture, which have not been reoccupied during later periods.

What steps the Government may take to protect their valuable property in the ruins cannot be stated,* but the intrinsic value of these ruins, and of "finds" made in them, are, from an archæological and antiquarian point of view, simply immense, as it is held by several of the experts that the key to unravel the mystery of the presence of the ruins in this country, and to trace the ancient builders to their homeland, will be found in the methods of burial and in the goldsmith's art of the ancients, which at present are hidden deep below the floors of these buildings as we see them to-day.

So far too many of these valuable relics have been distributed to all parts outside Rhodesia, and single specimens, of which no duplicates have been recovered, have found their way into the smelting-pot.

Though a considerable amount of gold in the shape of ornaments, even on very partial exploration of a few ruins only, has been discovered—yet it must not be forgotten that the later ancients who reoccupied the buildings of the earliest ancients were also gold traders, and, as before explained, it is believed that the extent of their gold exportation greatly exceeded that of the earliest ancients—we cannot doubt that the later ancients, who might be expected to be somewhat conversant with the methods of their predecessors, would satisfy themselves that no gold buried in the course of time by fallen walls or silted soil should escape their attention. But whatever their zeal in obtaining the precious metal, they did not disturb the buried remains of the previous tenants. Whether this abstention from ransacking the dead was occasioned by fear, reverence, or some religious belief, it is, of course, impossible to say, but the fact remains clearly demonstrated by the "finds" of to-day.

* The ruins are now protected by the Legislative Council of Southern Rhodesia.

MESSRS. NEAL & JOHNSON AND 'BOYS' WORKING THE ANCIENT DEBRIS HEAPS WITH DRY-SORTING MACHINE AT KHAMI RUINS

Every article of gold made by the ancients shows excellent design, workmanship, and finish. It was their universal custom not to weld their bangles, links of chains, and rings, for all these—and very many have been found—are without a joint, the two ends being always brought closely together, and in the case of gold wire the ends were often twisted together. All the branches of the goldsmith's art were practised by them, including gold wire drawing, beating gold into thin sheets, plating iron and bronze with gold, and burnishing.

Gold Wire.—The ancients appear to have drawn large quantities of gold wire of different gauges, at least half a dozen sizes having been found, ranging from the threadlike size, woven into the cloth or linen of which their clothes are believed to have been made, some of which wire in the cloth having been found, to the larger size of which the chain links and bangles were made. An iron instrument was found at Dhlo-dhlo ruins with six gravitating holes of varying gauge, one hole still showing a piece of gold wire stuck fast inside. Though this instrument may not have belonged to the ancients, yet it must have been used at a time by either the bastard race left here on the exodus or wiping out of the ancients, or by local races immediately afterwards, upon whom the ancients had impressed, by centuries of contact, somewhat of their arts and industries. In all probability this instrument is a crude imitation of the tool used by the ancients. Scraps of gold wire which have not been used in the manufacture of any ornament have been found. Gold wire was twisted, either singly or in two or three strands together, into bangles in various styles, probably round either hair or fibre which has long since decayed away, and on some of these twisted-wire bangles the gold wire has been marked with Zimbabwe patterns. The heaviest gold-wire bangle so far discovered weighs 6 ozs., and was found at the Mundie ruins. Gold wire was also used for designs—always of one of the Zimbabwe

patterns—on stools, pillows, etc., the wire being passed through the wood making exact patterns on each side. Gold wire was also used as bands for sticks or rods. The pillows and stools on which these patterns are worked have been found in the hermetically sealed tombs of the ancients. Gold wire was also woven together just as cane is woven into basket-work, and this has been found in quantities.

Gold Beads.—These form the largest bulk of all ancient ornaments yet discovered. The wearing of beads in all periods of the ancients was a very general custom—not one of the forty skeletal remains of ancients has been discovered without a necklace of beads—but the most massive beads are found on the floors of the original builders of the first period Zimbabwes, and these in great profusion, some of the ancients having adorned themselves with a weight of beads that must have proved rather burdensome and awkward to carry. The beads vary in size and weight and are all of solid gold. The largest weighed 2 ozs. 5 dwts., and the smallest are of microscopic size. Some of the larger beads had the chevron and other Zimbabwe patterns neatly engraved upon them, and on some the engraving is so fine that it can only be discovered with the aid of a magnifying glass.

The gold beads varied also in shape and manufacture. Some had flattened ends, others facets like cut diamonds; some were of solid gold punched, and others of pieces of gold bent round so that the ends met very exactly. Beads were found in all stages of manufacture—the raw pellet, flattened on both sides preparatory to having the holes punched through them and showing the marks of the hammer, in some cases also with the marks of the punch where the holes had not been made, others with punch holes driven in on both sides but not meeting, and many had split asunder before the punching operation had been completed, whilst spoilt beads and gold punchings are found on the floors

GOLD BEADS AND BANGLES DISCOVERED AT MUNDIE RUINS BELINGWE

and on the débris heaps, evidently swept away as unconsidered trifles not worth preservation.

Professor Rawlinson, in *Phœnicia*, states that gold beads were generally worn by Phœnicians of Europe anterior to 500 B.C.

Beaten Gold.—It was the practice of the ancients, so far as the nature of the finds can be judged, to cover their furniture, as well as some of the articles used in their religious worship, with gold beaten to a marvellous thinness. For instance, many of the wooden pillows and other articles buried with the ancients were covered with plates of gold fastened on with solid, wedge-shaped gold nails and tacks. The wood has decayed, but the gold plates and nails remain. From the amount of beaten gold and gold tacks discovered on the original floors a very considerable portion of the household furniture of those who resided within the ruins must have been overlaid with gold. The sun-images carved in wood were also covered with gold, and the impression of this pattern, which is so frequently met with in the temples in Rhodesia and in the countries where the Phallic worship of the Phœnicians was practised, still remains intact. This sun-image, of which twenty-one have been found, is pronounced by savants to be the "trade mark" of Phallic worship. The pieces of beaten gold so far discovered measured about $3\frac{1}{2}$ inches × 2 inches, 9 inches × 1 inch, and a piece of gold of this last-mentioned size was found round the head of ancient remains as if this had formed some head adornment.

Gold Tacks.—These tacks, used for fixing the beaten gold on the furniture, vary in weight from 5 grs. to 3 dwts. (the value of the latter being in these days about 12*s.*). They are found in great numbers with skeletal remains and on the original floors of the earliest ancients. Some copper tacks have also been found, but these are not at all numerous.

Gold Ferrules.—These were in all probability the ends of rods or sticks, and averaged six inches to eight inches in length, and about one ounce in weight.

Gold Plating. Numerous bronze and iron instruments, particularly arrow, and spear-heads and battle-axes, have been discovered which had evidently been very thickly plated with gold, large portions of the plating still remaining. The plating had caused the partial preservation of the ironwork.

Goldsmiths' Tools.—Burnishing-stones, some with gold on the surface of the burnishing portion, have been found at most ruins where gold-smelting operations have been carried on, also a soapstone gold-beater's hammer. London jewellers who have examined some of the gold bangles bearing herring-bone and chevron patterns have given their opinion that such patterns were stamped on with a whole and perfect stamp. The patterns on the beads, however, were carved in with a sharp instrument.

CHAPTER VIII

ANCIENT BURIALS

Where were the ancients buried?—Methods of ancient burial described —Buried treasure—Old Kaffir burials—Ancient garments.

WITH the patent evidences of vast populations of ancients having resided round about the ruins of Rhodesia during successive periods, each embracing many centuries of time, it is the most natural question to ask, "Where were all these ancients buried?" Many theories, both probable and improbable, have been enunciated to explain the inability of modern explorers of these ruins to discover the burying-places of the ancients.

Over forty skeletal remains of the ancients have been discovered in and close to the ruins, and these had been buried; also some twenty remains of ancients who had not been buried, and these are described later. But supposing the ruins had been wholly devoted for purposes of ancient burials, and this is not the case, not one thousandth part of the ancients could have received sepulture in them. We have still to search for their cemeteries, and, perhaps, these may be found at some distance from each ruin, hidden in valleys among the kopjes, where the modern prospector may not have trodden, or where the sub-tropical rains of very many centuries may have silted the surface soil, or the falling of débris from the summits may have completely covered them out of sight.

The conditions of the burials of the two score ancients

so far discovered demonstrate beyond question that the ancients, either for motives of personal veneration of their dead or of religious faith, were exceedingly anxious to preserve the remains to the utmost and to provide against their resting-places being easily desecrated and despoiled. This anxiety, it may be reasonably argued, was a national instinct, applicable to the general mass of the population, as well as to the few skeletal remains so far discovered. The first thought, even of the poorest Chinese labourer in foreign countries, is to save sufficient money to pay for the removal of his dead body to his native land, and well-to-do Chinese travelling abroad take their coffins among their luggage. This anxiety for burial, either in their native land or in the vicinity of some celebrated shrine, or in some particularly safe spot, is a characteristic manifested by many ancient peoples. The Arabian kinsmen of the ancients of this country removed their dead to the Bahrein Islands, in the Persian Gulf. This custom of deporting the dead to some unfrequented locality prevails likewise among the Mohammedans of Persia, India, and elsewhere.

However, it does not seem probable that, at such a great distance from the sea as is Rhodesia, and in a climate which causes the decay of dead bodies to be so exceedingly rapid, the remains of the ancients could have been taken to the coast for deportation to Arabia or any other country, especially as the discoveries so far made fail to show that the practice of embalming their dead was adopted by the old occupiers. Possibly there were certain shrines among the many temples in Rhodesia which might have been held by them in peculiar reverence, and in the vicinity of these temples may be found the main burial-places of the ancients, for, as their temples evidence, their religious faiths had strong hold upon their habits and customs. But at present the location of the burying-places of the ancient populations remains a mystery.

Some writers have suggested that as the periods of occupation by the ancients of this country cover the period when it was the practice of Mediterranean nations to cremate their dead, this practice of cremation might have been in vogue in Rhodesia, but so far there has been no evidence of such being the case.*

Mr. Bent considered that the ancients were "but a garrison in the country," and consequently their number was not considerable, and so an attempt is made to explain the paucity of buried ancients. But the later knowledge of the existence of over five hundred ruins in Rhodesia, as against the twenty-three described and mentioned by Mr. Bent, some of which five hundred ruins being of large size and major importance, some consisting of whole groups of ruins occupying areas of over a square mile, altogether destroys this argument. The ancient population was by no means "but a garrison." We have already shown that the results of the examination of the vicinities of the larger ruins proved that large populations of ancients, apart from any slave or native race peoples, dwelt round about the ruins. But so far inland, and at such great distances from their base at the coast, no mere garrison could both have held its position in the country and have superintended and guarded the many and extensive gold-mining districts scattered between the Murchison Range, in the Transvaal, in the south, to Tete, on the Zambesi, in the north, and from Penda-ma-tenka in Wankies, on the west, to Sofala on the east.

(1) The ancient gold-workings, especially those of lower grade, must have been worked by huge gangs of slaves, as was the custom in all the ancient countries of the world. (2) Huge gangs of slaves must have been employed in the tedious methods of crushing quartz by hand, and with crude implements. (3) Many of the five hundred Zimbabwes must

* "Cremation was not practised by the Phœnicians."—PERROT et CHIPIEZ, *The History of Art*, vol. i. p. 285.

have taken years to build, and slave labour to a great extent must have been engaged in quarrying for the granite blocks and in transporting them, in some instances, for considerable distances. (4) It would also be required for agricultural purposes, for grain would be necessary to maintain the large populations of ancients as well as for feeding the slaves themselves. (5) Slave labour would be necessary for carrying on the other industries and undertakings of the ancients.

Such a vast slave population as we are assured, both by examination and most reasonable probability, existed for many centuries in this country presupposes a vast population of the alien ancients to protect the towns and the many and scattered gold-mining districts, from both the hostile native races as well as from uprisings of the slave population, which were not infrequent in ancient history. To carry on gold-mining, gold-smelting, and every other industry imperative to the existence, well-being, and comfort of the ancients, all this covering periods of many centuries, but testifies that these ancient hives of industry which so thickly covered the country possessed a vast population of ancients, who resided here permanently, having their women and children, as shown, for instance, at Chum and Umnukwana ruins, surrounding them in their homes.

It is therefore not unreasonable to suppose that in due time the cemeteries of these ancients will be found, and as the minimum amount of gold found with the remains of each ancient so far discovered has not been less than one and a half ounces, not only may valuable finds be struck, but many clues may be found in the patterns and manufacture of the ornaments, which may lead to the solving of the great mystery of the Rhodesian ruins.

Most of the burials of the ancients whose remains have so far been discovered took place under the original floors of the builders within the ruins, and apparently directly under the inner dwellings. Two only were found just outside the main

entrance at Umnukwana ruins in the crevices of huge boulders. Certainly only a very few of the inclosures of some scores only of all the ruins in Rhodesia have been partially opened out and explored, and as ruins frequently have from six to ten inclosures, the possibilities of coming on other ancient remains are very great.

But the remains so far found within the ruins were, in all probability, those of the proconsuls or overlords of the district in which the sovereign industry of gold-mining was carried on, or of the chief stewards and taskmasters, or of priests, who, as is shown in Chapter xii., most probably resided within the ruins, while the bulk of the population of the ancients resided outside in the immediate vicinity. Therefore it is reasonable to expect that the cemeteries of the bulk of the ancient population will be found outside the ruins.

Little hesitation need be experienced with regard to definitely fixing the identity of ancient, or Mombo-Monomotapa, or recent and present skeletal remains. The conditions of burials of all these periods are so very clear and distinct that skeletal remains can easily be assigned to their proper periods. A general description of the various modes of burial will explain this at once.

Ancients found in the ruins are buried at full length and always either on the right or left side. Ancients were always buried under the original cemented floor or under the first or second floors above the original floors, each floor being about eighteen inches above the other. The mediæval and modern Kaffir peoples were buried near the surface and many feet above those of the ancients, between whom there are always cemented floors and several feet of soil. Again, the presence of a considerable amount of solid gold ornaments, with the old Zimbabwe patterns, is an unfailing feature of ancient burial, while with the Mombo-Monomotapa period remains have ornaments of iron and copper, only slightly and but in few instances banded with gold at intervals, while the

remains of past and present races of more modern Kaffirs only have copper, iron, and brass ornaments and glass beads of an altogether modern manufacture. In the same way the pottery invariably buried with the dead of all these periods greatly differs in design, glaze, ornamentation, and material, deteriorating with each succeeding period till it becomes identical with the coarse articles made by the natives of to-day.

The following are the places, with the numbers, at which the remains of undoubted ancients have been discovered: M'Telegwa (eight), Chum (four), Upper Longwe (two), Mundie (five), Longwe (three), Isiknombi (three), Umnukwana (seven), M'Popoti (two), while several were found at Thabas Imamba and Dhlo-dhlo, making a total of about forty ancient remains which had been buried.

But at Mundie over twelve other ancient remains, as well as the bones of ancients scattered about the floors, were found, and at Umnukwana seven undoubted ancients were found who had not been buried. These were lying under the soil outside the entrances, evidently just in a position in which they had been slain, and with them were found their weapons, also broken bangles of solid gold, and torn bangles of gold wire, all of Zimbabwe manufacture and design, and worn in the same profusion as by the ancients. This evidence of conflict and defeat of the ancients, for their bodies were never buried by their compatriots, is dealt with elsewhere as one of many instances showing that the ancients were finally driven out of this country by the rising of either the bastard races, the slave population, or the hostile natives of the country.

No gravestones, no marks on the floors or on the walls denote the spots where the ancients were buried, the inference being that there was anxiety to keep their resting-places secret. Certainly the decorative patterns on the walls were not intended to act as guides to spots where the ancients lay, for the patterns were built into the walls when they were first

erected and before any burials had taken place. Nor is there a single instance known during five years' exploration work in many ruins, of either an ancient or a Kaffir having been buried in the walls themselves, nor, for that matter, has any treasure or gold ever been found buried in the walls. Vandalisms galore have been perpetrated on some of the ruins because of the idea that either ancients with gold or some sort of treasure, were wont to be secreted in the walls. This false idea has been the cause of considerable damage to ruins, especially at Thaba Imamba and Tati.

All ancients being invariably buried under the powdered granite cement of the original floors, it is perfectly safe to conclude that all skeletal remains found elsewhere are either of the Mombo-Monomotapa times or of those of recent and present Kaffir races.

On the death of an ancient a grave was sunk through the cemented floor, apparently under his own dwelling, and the grave was made apparently without any reference to the points of the compass. As all original floors have a layer of ashes underlying them, the ashes in the grave were removed and replaced by some sort of red earth in which the body was laid always on one side or the other. His gold ornaments were buried on his person, and his cakes of gold still remained in the pouch on his waist, while, as in ancient Egyptian and present-day Kaffir burials, earthenware pots, probably once containing grain, were placed beside him. These pots of the ancients were of the finest clay, beautifully glazed, very thin, and engraved in the best style with the oldest Zimbabwe patterns. His head either rested on a pillow of water-grooved stone, as at Chum ruins, or on a wooden pillow very similar to those seen in Egyptian museums and in ancient paintings of Egyptian tombs, resembling in shape and pattern the best sort of pillows used by the Kaffirs of to-day. The wooden pillows were frequently covered with beaten gold fastened on by solid gold tacks weighing 3 dwts. each,

or were beautifully worked on both sides in gold wire with patterns of the oldest Zimbabwe chevron decoration. By his side, if he were a great man, was laid his rod of office with the beaten gold head embossed with the Phallic sun-image, and with solid gold ferrule six to eight inches long and weighing 1½ ozs. A floor of granite powder cement from four to five inches thick was then laid over him and huge fires dried and burnt the cement to the hardness of the rest of the floor. This process, while hermetically sealing the dead from decay and the effects of the weather, caused, in almost every case of ancient burial, the side of the corpse that was uppermost to become calcined. The intense heat necessary to harden the cement is largely responsible for the inability of explorers to secure, for scientific examination, a perfect skeleton of an ancient.

In course of time other burials of ancients of the Zimbabwe periods took place. A second floor was laid eighteen inches above the first floor, and between the two floors the corpse was laid on its side, also with his gold ornaments and cakes of gold, pots, and rod with gold head and ferrule, while the cement floor laid over him was burnt. His side was calcined as in the former burial. This process was repeated, in some instances, until three tiers of dead were buried, each being about eighteen inches below the other. No instance of more than three tiers of dead has been discovered. So uniform were the practices of the ancients in burying their dead that explorers, on striking the thin strata of red soil among the ashes under the original floors, have been able to know positively that they were approaching the remains of an ancient.

Ancients, young and old, women and children, men of full average height and those of giant size, some laden with wealth and others only moderately rich, some men of high position, all have been found buried beneath the original

floors, which are again buried, owing to the filling-in process of later occupiers, in some instances to a depth of fifteen feet.

At Umnukwana and Chum ruins were discovered the tiny solid gold bangles of children, too small for even a youth to wear. The ancients advanced in years have their arm, wrist, calf, and ankle bangles of solid gold, considerably worn, as if with years of friction, among the bunches of bangles, caused by movement of the limbs. Probably the leg or calf bangles were placed there in early years and never removed even at death. This is often the practice with the present natives.

The giant found at Chum ruins, in West Gwanda, measured fully seven feet in height;* one shin bone recovered was over two feet in length, while the bangles round his ankles were of an immense size. We read in Scripture that "there were giants in those days," but whether the ancients of Rhodesia approached the "sons of Anak" in height is impossible to say. The builders of the nauraghes in Sardinia were always called giants, and to the present day their burial-places are known as the "Tombs of the Giants." At the Monastery Diamond Mine, in the Orange River Colony, have been found giant remains of great age, but so little is known of this find that it would be impossible to connect that race with the giant remains found in Rhodesia. However, it is important to remember that the Prophet Isaiah refers to the people of Saba (the suggested first occupiers of this country) as of high stature. Strabo, Pliny, and Diodorus also speak of the Sabæans being physically robust, while Professor Rawlinson states that the Phœnicians were rather over than below the average standard of height.

In the chapter describing the gold-smelting operations of

* The skull, an arm, and a leg bone of this ancient were taken to England by the Hon. Maurice Gifford, and on the 3rd February, 1896, were handed to Professor Thane, University College, London, but no information, so far as can be discovered, has been made known as to the results of their examination.

the ancients we mentioned the great waste of the precious metal which is so noticeable on every hand. We might also allude to the fact that gold, in the form of broken bangles, tacks, and pellets, has been found on the original floors of the ruins just as plentifully as nails can be picked up from the floor of a modern carpenter's shop. The débris heaps, as we have already shown, contain gold pellets swept from the ruins, and four months' working with a small dry crushing machine on the débris heaps at Khami produced, on an average, over sixteen ounces of gold per month, and yet the débris heaps at Khami are practically untouched, as many thousands of tons of débris still remain unexamined.

The same apparent disregard of the value of gold so shown by the ancients is also demonstrated in all ancient burials so far discovered. We find that the greatest quantity of gold buried with any ancient was 72 ozs. (present value £288), that the least quantity was 1½ ozs., while the average amount of gold found with remains amounted to 17 ozs.

Every ancient had gold beads worn round the neck, for these seem to have been the most favourite and general form of adornment adopted by all these ancients. The beads varied in weight from 1½ grain to 1 oz. 14 dwts., the larger beads going ten to fifteen to the ounce, some having the holes through them punched, others being short lengths of flat gold with their ends beaten round to meet. Bangles of solid gold were on every ancient. These varied in weight from 15 dwts. to 6 ozs., and were of different styles of manufacture, being made of fine twisted wire, or of the solid metal on which were the Zimbabwe patterns. One interesting feature concerning these ancient burials is that with almost every remains were found, just at the waist, small cakes of raw gold, which had evidently been carried in a pouch on a belt. These cakes of gold weighed from 2 dwts. to 1 oz. 17 dwts.

Though the Mombo-Monomotapa period is of far later

date than those of the Zimbabwes, the examination of their burial-places shows to what extent the customs of the ancients were followed by the peoples of the Kaffir kingdoms. In these times the Makalangas, whose ancestors had, under the influence of the ancients, become to a large extent civilised, still showed in their commercial capacities, their industries, arts, and religious faiths, the impressions left upon them by the former settlement of the ancients in this country, impressions that in some departments of life can still be noticed in the Makalanga of to-day. It is known that, during the Mombo-Monomotapa period, these Makalanga, or "People of the Sun," worked for gold and bartered it to the Arabs for copper, apparently placing a much less value upon the precious metal than did the ancients.* So we learn that some of the Makalangas, while burying their dead in a sitting posture, and close to the surface of the soil, or in crevices among the rocks, buried them with all their personal ornaments, and laid beside them pots of poor material, make, and design, which once, it is believed, held grain. But, with the exception of the Mombo chief buried in the rudely constructed stone circle at M'Telegwa, very few of the Mombo skeletal remains had gold ornaments of any value, the gold generally being in bands at intervals on iron bangles, or gold beads at intervals on copper bangles. In these periods copper and glass beads appear to have been the favourite ornaments.

At M'Telegwa ruins was found with the Mombo† chief the cloth or blanket with fine gold wire woven in the pattern. Livio Sanuto, writing in 1581 of Monomotapa, said "the people wear cotton worked with gold thread." Seeing this was worn by these Kaffir people, and also that Chaldæa was famous for gold-worked cloth, it is natural to suppose that the ancients also wore linen and cloth worked with gold, and

* See Chapter xi., "Copper Ingots," also Chapter x.

† This is rendered as "Mombo," "Mambo," or "Mamba" by different writers.

that the cloth so woven and worn by the people of the old Kaffir kingdom was of a less superior quality. Antiquarians aver that the Sabæo-Arabians had their first home in Chaldæa, and if this were so, and it appears more than probable, it would be strange that they should take away from that country their knowledge of astronomy and the zodiacal science, and not at the same time have taken with them the art and industry of making cloth of gold, an art that in the later period of the Byzantine Empire was developed to a most gorgeous and elaborate degree. Ezekiel xxvii. 23, 24 shows that Babylon and Assyria supplied Phœnicia with embroidery of great value. See also Ezekiel xxvii. 20, xxvi. 7, 14, xxvii. 15, 19–22; and Esther vii. 10, 14.

The Kaffirs of the Monomotapa times and the present races of natives bury also in caves and in the open ground, and sometimes just under the surface of the soil inside certain of the ruins. The graves of Kaffirs in the open ground usually have stones piled over them. The dead are buried in a sitting position,* and have their ornaments and personal belongings with them, as also pots or jars of coarse material, construction, and design. The ornaments consist of bangles of solid copper, brass, and iron, and bangles of twisted copper, brass, and iron wire, with copper, brass, and glass beads.

An interesting question arises as to how the ancients were clothed. From ancient remains so far discovered we learn that they wore wrist and ankle bangles of gold and gold armlets, and also bangles above the calf, in the same manner as the present natives wear their ornaments of baser metals. It is probable therefore that the ancients wore armless tunics reaching almost to the knee, as such beautifully worked ornaments of several ounces in weight in gold are not likely to have been concealed by garments (see Chapter x.).

* It is known that some Makalanga tribes bury their dead extended at full length, also with the head towards the rising sun.

CHAPTER IX

THE AGES OF THE ZIMBABWES

Approximation by orientation, architecture, ancient history, and present conditions.

ONE of the chief characteristics of the Rhodesian temple forts or Zimbabwes is orientation. "The appropriate time," says Mr. Bent, "for the greatest of the festivals of the solar-worship would be at midsummer." At these Zimbabwes the ancient nature-worshippers have orientated their temples to the summer solstice, beside fixing their marvellously exact geometrical lines, so as to enable them to observe the passage of the seasons, and the heliacal rising of certain stars, as in the temples of Arabia, Egypt, Chaldæa, Assyria, and China. The age of any Rhodesian Zimbabwe—at least those of the first period—may be approximately ascertained by its orientation.

The geometrical and astronomical examination of a large number of ruins leaves no possible doubt on this question, and there is common agreement with regard to this matter among the archæologists, antiquarians, and scientists generally who have either inspected the ruins or written concerning them. The best-accredited savants of all the European nations who have considered the reports and descriptions of the Rhodesian ruins arrive at the same unanimous conclusion.

Dr. Schlichter says: "We have in the Great Zimbabwe an enormous gnomon (dial calculating point) before us, compris-

ing a total angle of 120°. Taking all the details into account, I found that the obliquity of ecliptic was somewhat more than 20° 52′, which brings us (considering that we have a good Chinese observation of the same period) to a time somewhat 1100 B.C. for the erection of the Zimbabwe ruins."

Mr. Swan, who fixed the orientation of a large number of Rhodesian Zimbabwes, obtains dates between 2000 B.C. and 1100 B.C., and came to the same conclusion arrived at by Dr. Schlichter with regard to the age of the Great Zimbabwe, while he approximated the date of the Lundi temple at 2000 B.C.

Mr. Wilmot shows very clearly that the emblems of the Phallic worship found at Zimbabwe and elsewhere in Rhodesia belonged to a people who lived in a period anterior to the tenth century before Christ. He is also of opinion that the earliest Zimbabwes were erected during the period when litholatry was practised, this being the earliest period of nature-worship; further, that they were erected before the Bronze Age.

But while the Great Zimbabwe temple has been shown to have been standing in 1100 B.C., and notwithstanding that it is admittedly the finest and largest example of the first or oldest period of Zimbabwe architecture extant, it is not necessarily the oldest set of buildings of that period in Rhodesia. We have already shown, as also have other writers, that each period of Zimbabwe architecture covered several, if not many centuries of time. The earliest ancients would not be likely to erect their first temple fort at so great a distance from the coast as is Zimbabwe, and disregard the district lying between Zimbabwe and the Sabi Valley in Rhodesian and Portuguese territories, over which intervening space there are so many ruins all of the first period of Zimbabwe architecture.

The Sabi Valley forms the natural and most convenient outlet to the coast for the populations lying between the

Limpopo and the Zambesi. It is therefore reasonable to suppose that the ancients first attacked the reefs that were in the south-east portion of Monomotapa, which is now in and on the border of Portuguese territory, erected their forts for local defence as well as for maintaining lines of communication with the coast, all still in the first period, and on proving the value of the gold areas of that part just within the south-eastern boundaries of Rhodesia, gradually spread out towards the interior of the country their lines of forts with larger buildings of capital importance as centres for the various gold areas as they became ascertained and their payability assured.

So far as the orientations fixed and dates approximated warrant, we can conclude that the first-period ruins which are to be found in the Sabi Valley, and in the present Victoria, Belingwe, M'Tibi, and Gwanda districts, and which cover an area easy of definition, were standing in 1100 B.C., many of them at a far anterior date, while some are believed to have been standing 2000 B.C.

Professor Müller, the great Austrian authority on Southern Arabian archæology, describes the temple-fort ruins of Marib, the ancient Sabi and capital of the Sabæan kingdom, and several archæologists of repute, comparing this description with that of the Great Zimbabwe architecture, arrive at the conclusion that they were both built by the same people. The general features of the first-period Zimbabwes are also those of the ruins to be found in South Arabia, where was the old Sabæan kingdom. This, taking the history of the Sabæans into account, could well have been 2000 B.C. to 1100 B.C., at which latter date the commerce and influence of the old Sabæans appear to have become absorbed by their younger and more enterprising kinsmen of Phœnicia.

Should the suggestion, made by many authorities, of the subsequent occupation of this country by the Phœnicians prove to be well founded, as it appears to be, we might thus be able to explain the presence of the later class of

Zimbabwes which in this work are described as of the second period. The history of the Phœnician nation is decidedly clearer than that of the Sabæan kingdom, and judging by the periods of growth, zenith, and decline of Phœnician power, we might safely approximate the period at which the later Zimbabwes were erected, and this would be from somewhat anterior to 1100 B.C. down to some time about the Christian Era. The style of architecture of the later Zimbabwes has been held to closely resemble that of some at least of those discovered in the old Phœnician colonies of the Mediterranean, but whether the builders in both cases were actually the same people it is at present impossible to state.

No credence appears to be placed on the theory of the occupation of this country by the Romans, who, according to Ptolemy, who wrote about 100 A.D., penetrated from the north through the heart of Africa, south of the Equator, to a nation called the Agizymba. De Barros believed the Rhodesian ruins to have been those of the Roman forts of the Agizymba of Ptolemy, but their architecture and geometrical plan of building rather dispose of this suggestion.

But when we consider the writings of Arabs of the eleventh and twelfth centuries we find some slight clue to the comparative time of termination of the last occupation of these ruins by the ancients, which, owing to the transition of architecture to the inferior building of the decadent period, must have been very many centuries after the first and second Zimbabwe periods. From that time we find that the natives of those days were conditioned very much as they are today. The earliest coast Arabs describe the natives of those days as black, naked, teeth-filed, with long spears (assegais), wandering preachers (witch-doctors), and worshippers of ancestors. These descriptions, together with the substratum of truth underlying the old Arab traditions, take us back to fully a thousand years ago. This argument applies also to the actual state of the ruins, which several writers consider

to have been then just in the same state as they are seen to-day, except for the vandalism of prospectors and amateur explorers.

But we can venture to go still further back than 1000 A.D. Every nation, without exception, holding a colonial possession, even if only for a comparatively short period of time, leaves behind it a half-caste or bastard race. This is seen in South Africa, which was only first occupied by Europeans some three hundred and forty years ago, where we have now a very large half-caste race of people. History provides no exception to this rule, but modern scientists affirm that such races in course of the unhurried processes of nature will always fall back on their strongest and original type. It is held by scientists that eventually the half-caste race of South Africa must, in course of time, become absorbed in the Kaffir races.

If after only three hundred and forty years' occupation of a small portion of South Africa by the Europeans such a large population of half-castes could have arisen as we now find, what can we expect might have been the results of the occupation of the alien and ancient gold-workers of Rhodesia, whose combined periods, it is believed, covered from before 2000 B.C. till after the Christian Era commenced? The early Europeans in South Africa came to permanently settle and colonise, to make their homes and to provide for their children, for they were of the redundant populations of the countries of their origin. But not so the ancient gold-miners. They apparently were not of the redundant or surplus populations of their mother countries, whether Saba or Phœnicia, or both. These came for gold, and occupied the country with massive forts as, says one authority, "they never considered that this country was their own." Gold-production, so far as present evidences lead, was the sole motive for their presence in this country, and all trade industries appear to have been subservient to the main object of winning gold.

Their purpose not being that of colonisation, as the word is employed to-day, but merely occupancy, with a certain set object in view, we can—noting the practices of mankind in various parts of the world, practices more common in ancient than in modern times—safely conjecture, especially in view of the bestial practices involved in some forms of nature-worship, that the half-caste race was an important one, seeing also that it had two thousand years for its development. That such a bastard race was a resultant of the occupation by the ancients is undeniable, and just as records prove that the Sabæans intermarried and mingled with the ancient peoples of Upper Ethiopia, so the same race most probably did likewise in the country now known as Rhodesia. Writers on this subject affirm that the fourth or decadent period of Zimbabwe architecture was that belonging to the bastard races, and this period is frequently spoken of as the Bastard Period. But where is this half-caste race to-day?

The length of time required to assimilate the half-castes to their stronger and original types would be immense, and we can add at least one thousand years for nature to accomplish this end. Certainly the condition of isolation in these inland territories would tend to expedite this process. This time brings us, with the thousand years already accounted for by record and sifted tradition, to the time of the Christian Era. Partial extermination by Kaffirs, amalgamation by marriage, and the natural absorption caused by the remnant of the race falling back upon their negroid type, might account for their disappearance.

But, as is shown in Chapter x., there are unmistakable traces of these people still remaining to this day, and these are to be seen in the arched noses, thin lips, and refined type of Semitic countenance commonly met with, especially among the Makalangas and Zambesi tribes, the Jewish rites, particularly with regard to food, the superior intelli-

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gence and calculating capacities and business instincts, the metallurgical cleverness still in vogue, and knowledge of astronomy, and the polytheistic faiths learned from the ancients, and still preserving several distinctly Semitic practices. Mr. Selous is of opinion that the ancient builders of Zimbabwe were not first destroyed and then supplanted by an inferior race, but that they became gradually fused with a lower race, which still bears traces of its admixture with the more intelligent people. But this view is not precluded by the suggestion of several writers of a wiping-out of the original ancients by their bastard following or by the Kaffirs led by the bastards.

Further clues to the period in which the ancients either deserted the country, or were exterminated, or driven out by the Kaffir tribes, or became fused with native races, may be noticed.

The baobab-tree (*adansonia digitata*) is a native of Africa, and is known as the monkey-bread tree, or African calabash, or Ethiopian sour-gourd tree, of fantastic look, its stem being of little height compared to its great thickness, averaging from twenty feet to thirty feet in diameter. It is frequently met with in Southern Rhodesia. These trees grow inside some of the ruins, particularly at M'Tendele, Chiburwe, and Baobab Kop ruins, as well as at other ruins, in all of which they have done considerable damage by splitting up and throwing down walls. These trees are known to require growth during several centuries to attain their maturity, and some are considerably over a thousand years old. Portions, at least, of the M'Tendele ruins are believed to belong to the second Zimbabwe period, which did not commence until many centuries after the older Zimbabwes had been built, and as the second period also covered several centuries, and as these trees would not have started their growth until after the departure of the ancient occupiers, and after a sufficient quantity of soil had silted into the interiors of the buildings,

some rough idea can be obtained of the great age of these ruins.

The ironwood tree, not indigenous to this country, and which requires several centuries to attain maturity, is found at full growth at Zimbabwe, Tati, and other ruins, and also on or near some of the ancient workings on the gold areas.

Chillies, capers, rice, and monkey nuts, which form an integral portion of the food of all tribes in Southern and Central Africa, were not indigenous to this country, but were admittedly introduced into these territories, as well as into the West Coast, from the New World, and as the Phœnicians are believed to have influenced in religion, customs, and arts the ancient peoples of South and North America, some explanation of their presence here may be to hand.

The mahobohobo is a wood also not indigenous to this country, and is now used for mining purposes, especially in timbering shafts. This tree grows in considerable quantities in several parts of Rhodesia.

Though only indirectly relative to the question of the ages of the Zimbabwes, it might be interesting to note that thousands of lemon trees thrive in a wild state in the Mazoe district, these trees not being indigenous; also that there are wild tomato areas in the Mazoe district; quantities of bananas grow in Manicaland, also yellow and black fig trees; wild vines, originally cultivated, and none of these indigenous, are to be found near most of the ancient ruins. In 1403 Abd-er-Rashid reported vines as flourishing in South-East Africa. Vines were not introduced into Cape Colony until 1655.*

Since the foundations of the earliest of the Rhodesian

* Sir John Willoughby writes: "An expert's classification of the existing flora might assist later inquiries into the origin of these ruins, for I have noticed many trees and plants in their neighbourhood which are not common to other parts of Mashonaland, and which might prove to be foreign to its soil."

"The Phœnicians seem to have carried with them some of their plants and to have tried to acclimatize them in their various colonies."—CLERMONT-GANNEAU, *L'Imagerie Phénicienne*, p. 113.

Zimbabwes were laid, if we are to accept the statements of many archæologists and savants concerning their age, what epochs of the world's history have been witnessed! The cities of Babylon and Nineveh have become but piles of half-buried débris. The Phœnician kingdom of the Mediterranean has been founded, and from being the foremost nation of the then known world it has sunk into complete oblivion. Egypt, which was then flourishing, has decayed. Moses has led the children of Israel towards the Promised Land. Carthage, Rome, and Greece have in turn risen and decayed, and well-nigh twenty centuries of the Christian Era have come and gone.

While all this world-history has been made, this country has contributed gold in enormous quantities to people, the memory of whom is but a dream. What food for reflection do the old ruins, with their nature-worship emblems, not provide for the Rhodesian prospector outspanning during the glaring noontide heat beside these eloquently silent walls, and how brief does the span of human life appear in comparison with the hoary age of these ruined buildings!

All the Zimbabwes, or temple forts, or forts in Rhodesia are in ruins. The altars are broken down, the orientated shrines, "open to the light of heaven," once sacred to the votive worship of sun, moon, and planets, and the forces of nature, have become desecrated, and "the snake and owl inhabit there," while the very emblems of the gods have gone.

No longer the cruel, bestial, and licentious rites and pious orgies comprised in Phallic worship stain the temple floors with blood, or make its walls ring with a shame that disgraces the name of man, for the "high places" have been almost destroyed by the ruthless hands of time, and the righteous maledictions hurled against Sodom and Gomorrah, Tyre and Sidon, and Samaria and its "high places," have been more rigorously executed in the ruined temples of Rhodesia than even in some of the cities directly mentioned in the Scriptures.

These Phallic worshippers have gone, the memory of them is blotted out, and the many places in Rhodesia that once knew them now know them no more for ever. Well-nigh all traces of these ancient peoples of Semitic race who once toiled in South-East Africa, taking scores of millions of pounds sterling worth of gold from the reefs of these territories, have disappeared far more completely than the aborigines of the New World, many of whom still survive amid the crumbling monuments of Mexico, Yucatan, Peru, and Bolivia; more completely than the builders of the monolithic structures strewn over the Polynesian islands; or than those who raised the Irish round towers, the pagan temples of Scotland, the "cloven stones," and set up the "sacred circles" in England as at Stonehenge, and scattered thousands of their monoliths and temples over all the Mediterranean lands, and all other parts of the world within the influence of the old Phœnician world-wide faiths which had their full growth in the "Palm Land" of the Eastern Mediterranean.

CHAPTER X

THE ANCIENTS AND MODERN NATIVES

GOLD prospectors in Rhodesia may, for the gift of a blanket, be guided by a Matabele or Mashona to the site of an ancient working on a gold-reef; and, as was explained earlier, extensive ancient workings have most usually been an unfailing indication of the existence of a payable reef.

But the endeavour to obtain from the natives information as to there being any ancient ruin in any particular district does not always so easily meet with success. Whether this reticence on the part of the native is the result of distrust of the white man, or on account of some of the ruins having in modern times been used as burial-places of native chiefs, or because of the awe in which the natives regard the ruins, it is difficult to decide.

Should a native be persuaded for a substantial present to divulge the location of a ruin, in all probability the prospector will be conducted more often than not to an Abolosi fort, erected, as it is contended, some two or three hundred years ago; not to one of the ruined forts or temples of the ancients. To the Matabele and Mashona all these ruins, whether ancient or Abolosi, pass under the name of *Tañala* (walls), and when asked to state who built these "walls" will unconcernedly reply, "Do not the books of the white men say?"

The present resident natives appear to have no tradition concerning the ruins. They do not know, or even wish to

know, who built them, and if any tradition did exist it would be difficult to obtain any information from them on the subject. Some natives have been known to confess in a half-hearted manner that they were erected by live spirits, just as was stated by De Barros in 1532, when he writes, "The natives say they (the Zimbabwes) are the work of the devil (supernatural), because they are beyond their powers to execute." And to illustrate the utter ignorance prevailing in their minds on this subject, many natives have been known to state that these ruins were the work of Englishmen, because nothing is impossible for them to accomplish.*

Unlike the peoples of the Mombo-Monomotapa periods who built their royal kraals within many of the ruins, the present natives, both of Matabeleland and Mashonaland, do not inhabit the ruins, nor will they venture near them at night or after sunset, in many cases not for bribes. Some tribes, it is asserted, believe the ghosts of their ancestors, who are buried there, haunt them, and that these spirits have the power to help or injure the living. Important chiefs and indunas have often been buried within the ruins, for instance, at Chipadzi Ruins, in Mashonaland, and at M'Telegwa Ruins, in Matabeleland, and this explains why pieces of buck flesh and jars of grain and native beer are found near them, these being offerings to the spirits to secure, say, success for a hunting trip, or any other venture about to be undertaken, or to ensure good crops.

The late King Lo 'Bengula had a horror lest the white men should learn that gold was to be found in the country. Perhaps he foresaw the evils that might come upon his people by an invasion of white men enticed by the presence of gold, for, as remarked by Professor Bryce, gold when

* Several Rhodesians, expert in native language and idioms, have, unknown to each other, stated that some replies given by natives as to the origin of the buildings include the following expression, used in very different parts of the country: "The walls were built when stones were soft." This expression is held by authorities to convey the natives' idea of prehistoric times.

undiscovered does least harm (aurum inrepertum et sic melius situm). Herein Lo 'Bengula manifested a wise sagacity. But the pertinacious demands for gold-mining concessions, with the tempting considerations offered in exchange, proved too much for this dusky potentate to withstand, and on the 29th August, 1871, was granted the concession, which was reaffirmed in February, 1888. But just as Lo 'Bengula had refused to grant concessions for working the reefs, so both previously and subsequently to the concession he was opposed to the ancient ruins being disturbed by those who imagined they contained fabulous stores of the precious metal, and his firm refusal to listen to requests made to explore them has doubtless saved untold vandalism from being committed.

But to return. We have remarked that the native mind is absolutely blank with regard to any history or any tradition concerning the ruins. This ignorance may be explained by the migratory spirit of all South African races. The Matabele are comparatively recent occupiers of this country, as they only came up from the south in 1838. The redundant populations of southern races have, in the course of time, passed on to the north. The Amaswazi branch of the great Zulu family came north and "wiped out" the Mombo-Monomotapa peoples, or Makalangas, or Mocarangas, as Dos Santos calls them.

The Makalangas, or "People of the Sun," who had hitherto been, since the passing away of the ancients, the dominant and most powerful of Kaffir races, "spoke," as Dos Santos wrote in 1602, "the best and most polished of all Kaffir languages which I have seen in this Ethiopia." They were at one time, probably owing to the impressions made upon their race by the ancients and the succeeding bastard races, also to a large extent civilised and certainly well versed and expert in various arts, such as those of metal-working and textile manufacture; were admirable men of

business, possessing the power of calculating money, and commercial instincts beyond those of any other tribes, and, according to Arab writers of the thirteenth century, themselves mined and washed for gold and traded it with the Arab merchants at the coast.

It is held by several authorities that the Makalangas were the dominant race in South Central Africa, with vassal kingdoms extending beyond Monomotapa* itself from Congo, and Zambesia to the Orange River if not to the Cape of Good Hope. Duarte Barbosa (1516) states that "the Moors of Benemotapa say there is much gold in a country very far situated in the direction of the Cape of Good Hope, in another kingdom which is subjected to this King of Benemotapa—a very great lord having many kings under his vassalage. His country runs through the desert as far as from Mozambique to the Cape of Good Hope." Johnstone (1603) states that the King of Monomotapa was superior lord to all the kings of the countries extending to the Cape of Good Hope (see also Chapter iv. as to the limits of the mediæval kingdom of the Monomotapa). De Barros (1532) says that the natives of Benemotapa had more intelligence than the coast natives of Mozambique, Kiloua (Quilva), and Melinde, and that among them theft and adultery were punished very severely. With reference to the recorded textile industry of the Makalangas, it is interesting to learn from this writer that the King of Monomotapa would only wear such cloth embroidered with gold as had been manufactured in his country, lest something obnoxious to him might be introduced if such clothing were obtained from abroad. We also learn from Livio Sanuto (1588) that the clothing of the Makalangas of the Monomotapa kingdom

* Mr. Baines states that "Monomotapa signifies a place where something valuable is found." Other writers state it means "Lord of the Mines," but all agree that it conveys the idea of a place wherefrom great mineral wealth is obtained. (See opinion of Rev. G. Cullen Reed stated later in this chapter.)

was made of linen and cloth interwoven with fine gold wire. This material so interwoven was found on the remains of the Mombo chief in the M'Telegwa ruins.

But what a contrast do we see in the present Makalangas of Matabeleland and Mashonaland, for the Mashonas, says Mr. Bent, are the descendants of the people of Monomotapa! They are still here, but it is difficult indeed to recognise in this timid race of slaves the bold and warlike people who for centuries were the superior and most powerful race of Monomotapa. The transition in their case is a vast one, and can be explained. Their dominance and cohesion were utterly destroyed when the northward march of the Amaswazis began. Hunted, persecuted, and taken for slaves by their conquerors, they sank from the position of the most superior Kaffir people to being "dogs of slaves" (*M'Holi* = slaves and *Amaswina* = dogs), timid, cowardly, and servile, taking refuge in kopjes, and hardly daring to show their faces even to till the small patches of ground close to their stronghold dwellings.

Later on the country was ravaged by the people of Cazembe, and later still the present Angoni crossed the Zambesi from the south, after having occupied large portions of Southern Rhodesia for a considerable period. Still later the present Barotsi from the south temporarily occupied the country and then crossed the Zambesi to their present territory, while in 1838 the Matabele, or as they style themselves, the Amandabele, came up from the south and conquered the country.

To all these successive conquerors the Makalangas, who to this day still form a large proportion of the native population, were the slaves and tillers of the ground. Their cohesion was so completely destroyed, and their past arts and industries so entirely forgotten during four centuries of persecution and slavery, that what is seen of them to-day is but a sorry picture of a past glory, and the people who once boasted

a long line of powerful kings, and themselves worked for gold, sank to such a level of ignorance that for a small bundle of brass wire they would gladly give in exchange as much as fifty ounces of gold, while to modern pioneers and traders of the early days of the modern white occupation they would part with such few gold ornaments as they possessed for an altogether inadequate value in food.

Even as early as the thirteenth century the decadence of the Makalangas from a former state of semi-civilisation was noticeable, for the Arab writer, Omar ibn l'Wardi, states (circa 1200), in alluding to South-East Africa, "The most remarkable produce of this country is its quantity of native gold . . . in spite of which the natives adorn their persons with ornaments of brass."

Duarte Barbosa (1516) writes: "The people of Monomotapa come to Sofala charged with gold, and give such quantities that the merchants gain one hundred for one." Again he writes: "The natives bring to Sofala the gold which they sell to the Moors without weighing it, for coloured stuffs and beads of Cambay."

De Barros (1532) says: "The earth of Monomotapa is so rich that if the inhabitants were greedy they could obtain enormous quantities of the precious metal, but they are so lazy, and have so few wants, that they require to be pushed by famine before they will work in the mines."

To-day their decadence is even more marked. Sir John Willoughby says of the Makalanga: "He has no wants beyond a blanket or two, a wife or two, a few beads, a pinch of salt, and a sufficiency of Kaffir beer. With these he is perfectly content to drone through life, and can only with difficulty be persuaded to attempt the simplest kind of work. Brutalised and degraded by a long course of raiding by the Matabele, he has become little better than the hunted beast."

Mr. Selous states that "the natives seem to have lost all knowledge of even the most primitive processes employed

by their forefathers to extract the gold from the soil." This remark, judging by the context, applies only to quartz mining, which the natives have abandoned. They still wash for gold in some parts of Mashonaland. This abandonment of quartz mining appears to have commenced as far back as before the days of Manoel Barreto, for he states: "The Kaffirs of Monomotapa prefer the gold taken from the rivers to that taken from the mines."

Yet are there in their pursuits some traces of their former days of enlightenment, some germs of a forgotten knowledge, some instincts above the environments in which they are now placed, a latent force that, with contact with the civilisation of the white man, may cause them to awake and spring into some newer life with a far prouder name and history than they to-day possess. Several authorities, judging the mental capacity of this people, believe that when the Matabele race shall have died out and been forgotten, the Makalanga—the ancient "People of the Sun"—will, saved by their Semitic connection, once more become a potent force among the peoples of South Africa.

Mr. Bent, speaking of the Makalangas, observes: "Some of them are decidedly handsome, and not at all like negroes; many of them have a distinctly Arab cast of countenance, and with their peculiar rows of tufts on the tops of their heads looked *en profil* like the figures one sees on Egyptian tombs. There is certainly a Semitic drop of blood in their veins; whence it comes will probably never be known, but it is marked both on their countenances and in their customs." Mr. Selous affirms that "the native races of Mashonaland at the present day belong to the Bantu family, who are certainly not a pure race, though the negro blood predominates with them. The infusion of foreign blood, which undoubtedly runs in their veins, must have come from a lighter skinned people, for I have noticed in all the tribes of Kaffirs amongst whom I have travelled that good features, thin lips,

and well-shaped heads are almost invariably correlated with a light-coloured skin." Mr. Bent and Mr. Selous, in expressing this opinion, but concrete the opinions of almost every writer of authority on the question of the Makalangas.

Particularly is this the case with the Melembo tribe, which is only met with in the mountain districts of Belingwe, in Matabeleland. This tribe is very small in numbers, and exclude themselves very rigorously from contact with other tribes, even to such an extent that they are only known to marry within the circle of their own tribe. The marriage of a Melembo woman with a member of another tribe is considered by them to be a disgrace. Many authorities believe the Melembos to be the direct descendants of the ancient Semitics, or, at least, the descendants of the bastard races which existed at the time of the voluntary, or more probably the involuntary, exodus of the ancients from this country. To a great extent they practise Jewish rites and customs, especially regarding swine, which they will not eat, nor will they, though starving, partake of the flesh of an animal unless its throat has been cut before its death. The rite of circumcision is with them most rigorously practised, though this is also a custom prevailing among several other African tribes.

In considering the impressions made upon the race of Makalangas by the Semitic ancients who built and occupied the Zimbabwes in Rhodesia, many interesting features present themselves. The stay of the ancients in this country can be shown to have been so lengthy and so extended that some evidences of the ancient impress upon the mental and physical conditions of the present Makalanga are noticeable to this day, notwithstanding well-nigh two thousand years have flown since the influence of the ancients was withdrawn. Certainly contact with the Arabs of the coast may have in some degree tended to the preservation of this impress, still the fact remains undisputed that among the Makalangas

can still be found links connecting them with the ancient Semitics.

1. *Physical features.*—Their Semitic cast of countenance has already been referred to. Arched noses, lighter-coloured skin, thin lips, and refined type of face are very commonly met with among these people.

2. *Intelligence.*—In mental capacity they are more advanced than any other tribe in South-East and South-Central Africa. This fact is mentioned by almost every Portuguese writer since 1516, some of whom declare the Makalangas to have been far more intelligent than the natives of the coast, who for many centuries had the advantage of contact with civilised people. Their commercial instincts and shrewdness are their pre-eminent characteristics to this day. Their facility in calculating is beyond that of any other tribe. Matabele "boys" receiving their wages will appeal to a Makalanga to count the money and to assure them they are receiving the stipulated amount of wage, while the Makalanga play the Isifuba game, which is a game of calculation, in a far more complicated form than any other tribe. Possibly their superior knowledge of astronomy may be a relic of their contact with the ancient sun and star worshippers. In their musical proclivities they exhibit ideas of harmony which are quite exceptional among South African peoples. The "Makalanga piano" is of complicated construction, requiring great skill of manipulation, and resembles similar pianos found in Egypt and represented in the British Museum; while from a concertina a Makalanga will evolve chords and combinations which, though decidedly monotonous, are often somewhat surprisingly musical and correct. It may be noted that Makalanga children are particularly intelligent, but this brightness wears off before they reach maturity.

3. *Industries.*—The Makalangas are a nation of copper and iron workers, in which industries they are true artists. Formerly they worked very extensively in copper, and to

this day they manufacture ornaments such as bangles and beads from that metal. In mediæval times they were to some extent goldsmiths, for native-made instruments for drawing wire have been found with gold wire still remaining in the gravitating holes. Mr. Selous states that the ruins of Umtasa's town, on the Chodzani River, show that the art of building walls of carefully fitted granite stones is not yet dead among the Mashonas. Also in the mediæval times they manufactured linen interwoven with fine gold wire, for we find in the oldest Portuguese writers mention of this, and also of the fact that the King of Monomotapa would only wear such linen which had been manufactured in his own country. Probably these arts formed the basis of their present industry of weaving bark and grass, and of manufacturing finely twisted wire bangles, which latter articles closely resemble those made in Europe by machinery. In their wood-carving and pottery, Mr. Wilmot states, there is a link with the past, the patterns being geometrical and closely resembling the fretwork decorations typical of the Phœnician litholatric worship practised countless ages ago. Mr. Selous points to the fact that the wooden household dishes of the natives are identical in shape with the ancient soapstone dishes discovered at Zimbabwe. He also states that the gold-washing dishes of the natives of Mazoe are square with rounded corners, while all their household dishes are round. Their gold-washing pans, he believes, retain the form of the original pans of the ancients. He further points out that in Katanga the form of the mould in which the natives run their molten copper is almost identical in shape with the soapstone mould found by Mr. Bent at Zimbabwe. The female human breast pattern of the ancients is still employed by the natives in decorations.

4. *Dynastic names.*—The chiefs of all Makalanga tribes invariably have dynastic names in the same manner as the Pharaohs of old. Writers suggest that this shows a link with northern people.

5. *Totems.*—Every tribe has its totem, and as the lion was the totem of Judah and the bull of Ephraim, so the lion, the crocodile, buffalo, or one of the buck tribe, forms the totem of the Makalangas. Kromer, in *Akademie der Wissenschaften*, states that the system of totems originated with tribes in Arabia. The totems of the Indians of North America have been suggested as resultant of Punic influence, Carthage having been a Phœnician colony.

6. *Doorah.*—The Makalanga beer, which they call doorah, dowra, or doro, has the same name as the beer made in Abyssinia and Arabia, and is made in exactly the same manner. Xenophon's description of beer made in the mountains of Asia Minor fits in with the manufacture of Kaffir beer as made to-day. This beer is called 'Mtwala in Matabeleland and southern Mashonaland.

7. *Food for the dead.*—Pots of grain and beer are placed near the corpse. A similar practice was employed in Egyptian burials.

8. *Pillows and sceptres.*—Mr. Bent points out that the Makalanga pillows, both in pattern and decoration, closely resemble the ancient pillows found in Egypt, and now in Egyptian museums. The iron sceptres borne by Makalanga chiefs have, says Mr. Bent, their parallels in the north of the African continent.

9. *Stone buildings.*—Authorities agree that at one time the Makalangas were in the habit of erecting circular huts of stone. This practice is shown in the inferior buildings erected on the present floors of many of the ruins, the stones of which have evidently been removed from the ancient walls. The art of building with stone is believed to have been a heritage from the ancient Semitic occupiers.

10. *Religion.*—In dealing with the religious faiths of the Makalangas we are faced with some little difficulty, for the writers on this subject may be divided into two distinct camps, each maintaining diametrically opposite opinions.

As these are men of undoubted authority on native questions, being intimate with the natives and well versed in their customs and traditions, this may appear strange, but it is not so. Each authority has accurately described the Makalangas as he has found them in particular districts, and all these writers are absolutely correct in their statements. The Makalangas were once a powerful nation, but they can hardly be called a nation to-day, for after centuries of slavery they have become separated and spread over vast extents of country, though the bulk of them are still to be found in Matabeleland and Mashonaland. To-day they form separate tribes of the same race with varying dialects, and in some instances with customs entirely distinct; but, as Mr. Selous observes, "the blood of the ancient worshippers of Baal still runs in their veins."

On the one hand, De Barros (1532) says: "The people of Monomotapa (Makalangas) believe in one God, whom they name Mezimo, and adore no idol," and "they possessed a distinct idea of the Supreme Being." Mr. Bent writes: "In religion they are monotheists; that is to say, they believe in a Supreme Being called Muali, between whom and them their ancestors,* or mozimos, to whom they sacrifice, act as intercessors. They lay out food for their dead; they have a day of rest during the ploughing season, which they call Muali's Day; they sacrifice a goat to ward off pestilence and famine, and circumcision is practised." This opinion is supported by several authorities on local natives.

On the other hand, we read that the Portuguese missionaries (1631) state: "The people of Monomotapa are nearly all pagans, and are without knowledge of religion"; while Sir John Willoughby asserts: "Throughout the country (Mashonaland) the natives know no God. The 'Muali' of the south and the 'Molemi' of the north is merely a vague

* "Ancestor-worship, forbidden by the prophets, was common to the Hebrews along with all the nations of antiquity."—PERROT and CHIPIEZ.

sort of spirit, of both good and evil repute, who is supposed to be the prompter of every action—good, bad, or indifferent. They neither reverence nor believe in the shades of their ancestors, beyond a superstition that the ghosts of some folks' fathers and forefathers are able to annoy their descendants. Witchcraft obtains throughout the country as the chief and almost sole belief of the people."

Herr Mauch (1871) describes a sacrifice which took place among the natives at the conical tower in the elliptical temple at Zimbabwe. Mr. Baines gives a sketch of a sacrifice of black oxen at the base of this cone. The cone appears to have been held in some sort of superstitious regard by natives, at any rate up to the eighties. Mr. Harry Posselt, who resides near Zimbabwe, states that before the late Zimbabwe chief was expelled from the ruins he was in the habit of offering up sacrifices of black oxen. These practices appear to confirm the statement of Santos (1602), that "the people of Monomotapa make great obsequies to their ancestors." The sacrifice of bulls to Baal was a general practice of Phœnicians (Rawlinson). Mr. Bent also relates that sacrifices of bullocks to defunct kings took place in his time at Mangwendi's, also at 'Mtoko's, where the worshippers were sprinkled with the blood, as also does Mr. Selous, while several writers mention the sacrifice of oxen in the nineties at Lutzi. These sacrifices took place in or about the month of February in each year. In certain parts, in the ploughing season, the Makalangas only work for five days together, and on the sixth day they rest in their huts and drink beer. This day of rest, Mr. Bent considers, may be of Semitic origin. He also alludes to the fact that the Makalangas employ the same custom of obtaining labour as still avails in Asia Minor and the East—by brewing large quantities of beer.

But it may truly be said that other Kaffir tribes located much further to the south also have certain customs which

may be traced to a Semitic origin. This is so with reference to all Bantu people. But after examining all the available authorities as to these Kaffir peoples, we doubt if they possess these traits as distinctly and as numerously as do the Makalangas. Mr. Bent states that it is believed that the Basutos at no very remote period migrated from Monomotapa, while in 1720 several tribes of the Makalangas were forced south by Zulus and entered Natal, while everything points to intimate relationship having once existed between the Makalangas and the Kaffir peoples of the south. It has already been shown in Chapter iv. that tribes, at any rate as far south as the Orange River, were subject to the kings of Monomotapa. In this way the stone buildings of the Basutos have been accounted for.

Moreover, it is believed that the ancients worked in Natal, Orange River Colony, and Namaqualand, though this has not so far been distinctly proved. At any rate, the western fleets of the Phœnicians are known to have visited the west coast, while it is more probable that the Punic people of Carthage, the enterprising colony of the Phœnicians, also exercised influence on that coast, while Portuguese records show that as early as the sixteenth century the Arabs, who were Mohammedans, traded along the whole of the coast of South-East Africa.

Mr. F. C. Selous, the well-known hunter, in *Travel and Adventure in South-East Africa*, expresses opinions on the ancient ruins and the traces of the ancients found to-day among the Mashonas, which are worthy of consideration. He says:—

"Let us suppose, then, that two or perhaps three thousand years ago a commercial people penetrated from Southern Arabia to Mashonaland. They were acquainted with the requirements of the civilised nations of Asia at that period and understood the value of gold. This metal they discovered amongst the hills and in the streams of Mashonaland. In

time these Arabian merchants gained a footing in the land and taught the black aborigines to mine for them. Their principal station was at Zimbabwi, where they built, with the forced labour of the aborigines, a temple for the worship of Baal and a strongly-built and well-situated fortress. But I take it that, like the Arabs in Central Africa at the present day, these ancient Arabians brought few or no women with them, but took a very handsome allowance of wives from amongst the aboriginal blacks. For a long period intercourse was kept up with Arabia, and during this period the gold-seekers spread over the whole of South-Eastern Africa from the Zambesi to the Limpopo, everywhere mixing with the people and teaching them their own rude arts of wall-building and gold-mining. In course of time we will suppose that events happened in Arabia which put an end to all intercourse with the distant colony in Mashonaland, and as time went on, as the alien race were still in small numbers compared with the aboriginal blacks, and as they had none of their own women with them, they gradually became completely fused and nationally lost amongst the aborigines. The mixed race called the Bantu had been formed, which spread in course of time northwards as far as the Congo and southwards as far as Cape Colony. . . . At any rate, I am absolutely convinced that the blood of the ancient builders of Zimbabwi still runs (in a very diluted form, if you like) in the veins of the Bantu races, and more especially so amongst the remnants of the tribes still living in Mashonaland and the Barotsi of the Upper Zambesi, who are, there is little doubt, a branch of the Barotsi tribe who were destroyed by the Matabili in Mashonaland, though the separation took place long prior to this event.

"I make this suggestion after much thought, a close study of the relics unearthed at Zimbabwi, and a knowledge of the natives of South-Eastern Africa gained during many years of travel."

With reference to the Abolosi forts, a Barotsi, who has not come down south at a very early age, can say much concern-

ing these rude walls which are to be found in such large numbers on the kopjes of Southern Rhodesia. These, as already explained, are lines of unhewn stones forming rudely thrown-up ramparts so as to form inclosures which conform to the contour of the summits of the kopjes. From this Barotsi we learn that even in the days before his people crossed the Zambesi these walls were here, and that they were erected by the Abolosi. There appear to have been two races of conquerors styled Abolosi: one of these, it is believed, was the Cazembe of the present Northern Rhodesia, who, according to Diego de Conto, devastated the country of Sofala, and entering into Monomotapa, entrenched themselves and conquered the country.

The old Barotsi, Makalanga, and Mashonas have very frequently utilised the ancient ruins of Southern Rhodesia for purposes of carrying on their copper- and iron-smelting operations. In almost every ruin can be seen on the present floors the sites of their furnaces, while portions of the clay furnaces lie about in all directions, together with copper and iron slag and cinders.

The Rev. G. Cullen H. Reed, of the London Missionary Society's station at Bulalima, in Matabeleland, who has laboured for some years among the Makalanga of that district, writes to the authors as follows:—

"In all descriptions of the Makalanga customs it must be carefully borne in mind that there is no tribe, existing as one, which bears this name, but the people to whom it is applied consist of many tribes having their own peculiar traditions and customs more or less allied, but with considerable differences most confusing to the inquirer.

"So far I have not got one of the old men to say there was a definite meaning to the term 'Zimbabwe,' save as to the name of the old capital of Mamba. It may, however, be derived from the words *ndzimu* and *ibgwe*, and mean a 'spirit of the rock.' Monomotapa and Benomatapa are,

I think, mistakes on the part of the Portuguese, at any rate, no one now knows them. It seems as if a phrase, no doubt often heard by the early visitors, had been caught up and misapplied as a name. *Onamata* means to 'visit,' or 'sit with,' in the sense of a subject to a chief. Hence, if I am right, *Monamata pa* (*na he*) means 'he visits the chief,' and *Benamata pa na he* is the plural.

"Of a people called Agizimba, or anything like it, I can find no trace. Possibly their name may be a corruption of *Kudziba*, 'to build so that it cannot be broken out of or into,' *i.e.* to fortify, as the early Portuguese writers said 'the Agizimba entrenched themselves.'

"In regard to religious faiths, I have by no means, as yet, fathomed their beliefs, but this much I think is certain. They believe in a spirit who made the world, and who especially is the giver of rain and the fructifier. He is called *Uñwali* or *Mñwali*. There is also a spirit called *Pandri* (*pandra*, to gnaw or break with the teeth), who is by some said to be the same as *Mñwali*, by others, different. These, or this, spirit cannot be seen by anyone, but can be heard. He has a wife, or wives, and children, also priests, who act as intermediaries between him and his worshippers. He is supposed to both eat and drink a portion of the food and beer offered to him.

"Several of the tales told about Mñwali remind one of Greek myths. As an illustration of this I append one. Mñwali went to a man named Khari, in his hut, and said, 'Khari, give me a blanket, I have no covering.' Khari objected to his coming into his hut to beg and told him to come out into the courtyard and ask before all the people. Mñwali refused, and Khari ordered him out of the hut, but as he would not leave Khari went outside himself and called a boy, saying, 'Take fire and set a light to that hut. We will see if Mñwali will stay there then.' It was done, and then Mñwali was heard from a tree near, saying, 'Khari, you have offended only your hut.' Then Khari ordered the tree to be cut down. It was done, and Mñwali was heard from the top of another hut, saying, 'Khari, why do you offend

against your tree? Khari then went to his cattle post. When the herd boy was driving in the cattle Mñwali seated himself on a bull. The bull left the herd and the boy struck it. The bull turned and said, 'Son of my father, why do you beat me? Your father did not do so." The boy was frightened, and ran to the post and told Khari the bull had spoken to him. Khari sent four young men to make inquiries, and one of them struck the bull, which said, 'Oh, oh! you have brought many to strike me. Your father did not do so." This was reported to Khari, who ordered them to kill and eat the bull. This was done, one cutting up the meat and another pegging out the skin. But they found the meat would not roast, nor would the skin dry. While they gazed all the meat, bones, and skin were caught up, and they watched them go up to heaven. They heard Mñwali laugh and say, 'I have got more than a blanket.' The young men returned and reported to Khari what had happened.

"I have little doubt Mñwali's manifestations are tricks of ventriloquism on the part of his priests, as he is never heard to speak except when a priest is present, or except in one place where is a cave sacred to him, and which is never penetrated by the people. Further, the voice is always described as the common falsetto of ventriloquial entertainments. Mñwali is also said to have worked wonderful cures by directing persons where to go to find the required herbs, and also as to what herbs to use. Two cases are noted of his curing madness by having the patients inside his hut alone with him, though he denies possessing the power to cure madness. On one occasion a chief asked that he and his people might see him whom they worshipped, but Mñwali declared it would terrify them. They replied it would not, and he threw them a rat out of the hut round which they were crowding. They naturally scattered with cries of surprise and alarm, and Mñwali, laughing, asked them if they were frightened at a rat, how could they say they would not fear to see him?

"Some speak of Mñwali as having been born, others deny

he was ever born. The human race is by some said to have issued out of a rock by order of Mñwali, each tribe separately. Relations, and even a mother, of Mñwali are spoken of and named, but these are only human beings who have been called by the title of Mñwali. There are two titles for Mñwali, both giving an idea of evil in his nature—*Pandri*, 'the gnawer,' and *Suzwane*, which though meaning 'cunning, slim,' is used as a terrible curse, something akin to our word 'devil.' This idea is borne out by the statement that he created wizards, witches, thieves, etc. In worship Mñwali can be inquired of at any time, and constantly is in cases of sickness, lost people, and especially for rain and crops. He is heard by the inquirer, who is outside his hut, replying to his priest who has entered to put the question to him.

"At harvest time the people gather at certain appointed places to thank him for their crops. They bring native beer and corn with them. All the beer and porridge is placed in his hut and left there for a time. After a time one pot of beer and one dish of the porridge is found by the priest to have been consumed, but the foam on the top of the beer has not been displaced, nor is the skin formed by the cooling of the porridge broken, yet both the beer and the porridge have disappeared. This is what the people are told by the priests. The rest of the food is consumed by the people themselves during the continuous days and nights of dancing and singing to the accompaniment of hand-clapping, drums, and rattles which follow.

"All the Holy Days I have yet heard of are a day called *Luselo*, *i.e.* every seventh day after the beginning of the month of digging, when it is unlawful to do any work in the gardens. The only reason I have heard is—that the oldest people told them so. Also that when the moon was dead there should be no gardening done, or when much thunder threatened, or for a day after hail. When the corn shoots, and again at harvest, there is the ceremony of 'giving to the spirits,' lest these should injure the crop.

"Ancestor-worship is wholly due to fear. Every sickness

and trouble is credited to the malice of the spirits of their ancestors (unless due to witchcraft), and these must be appeased by gifts of food. In every family residence there is a place under a raised platform of poles where three stones are set in a triangle. These are dedicated to the ancestors of the residents. Here, at times of sickness or at the sowing or harvesting of corn, the family gather. A hoe, an axe, and, if the head of the family be a smith, a hammer also, are placed by the stones. A pot of beer is brought, and the head of the family, taking some of this in a calabash, and rising, recites words to the effect that they know not wherefore the sickness comes, but fear the spirits are hungry, and he says, 'Here, father, is thy food.' He then pours the beer on the ground by the stones. The little children on hands and knees suck it up as it flows. This is repeated as often as may be requisite to appease the spirits, said by the casting of bones or dice to be offended. Then all rise and stand round these stones with hands upraised, each hand full of corn. The father then recites a prayer for the cure of the diseased member of the family, or for the prosperity of the crops, as the case may be, and all simultaneously cast the corn down on the stones, where it is left for the birds. That dread is the motive power is confirmed by the fact that spirits of bad men, or of those likely to be angry at being neglected by their surviving relatives, such as those dead of hunger, or those unburied, are most frequently sought to be propitiated by this service. Some tribes place a python's skin by the stones for this ceremony.

"Of the ruins, the usual remark is that the oldest tradition says they were always the same as now. They considered them to have been the work of Mñwali until they saw the white man's buildings. In my district the natives appear to have no fear of them, or any regard for them save wonder.

"They bury their dead in the town, usually outside the hut, wrapped in an ox-hide blanket, lying at full length, the head to the east. The graves are some five or six feet deep. If the deceased were a snuffer, the potsherd used for grinding

snuff is buried at the head. A chief would be buried in the cattle kraal.

"If a man were killed in battle, the relatives took a bull and killed it on the veldt. The meat was then cut off the bones without having been skinned, it was then roasted and eaten. The bones, unbroken, were placed in a blanket and buried in the town, after which all washed as after a funeral. The tips of the horns of such animals were worn as charms against death in war. This was done as the body of the deceased had been eaten by vultures, and therefore could not be buried.

"The following reminiscences of Mambo's time may be of interest. Whenever Mambo moved about he was surrounded by young boys, and if anyone were seen crossing the path ahead he was seized and brought to Mambo, who demanded why he was committing so great a crime when he knew Mambo was travelling, and ordered him to be killed. Mambo was the owner of a herd of tame buffaloes, elephants, and lions, captured when young or bred in captivity. I suppose it is needless to remark that Mambo is only a dynastic title like that of Pharaoh."

Note.—Most of the Portuguese writers of the sixteenth century speak of the people of Monomotapa as "Mocarangas." Later writers, while employing the name "Mocarangas" for these people, also call them "Makalangas." Many authorities on native language have always contended that the more correct title of Mashonaland is "Makalangaland."

CHAPTER XI

ANCIENT RELICS AND "FINDS" DISCOVERED IN THE RUINS

THE following seventeen "finds" are a selection from the lengthy list of articles found at Zimbabwe in 1892 by Sir John Willoughby:—

1. Portions of ancient crucibles showing gold, and gold in the flux.
2. Pieces of soapstone bowl with Zimbabwe patterns.
3. Pieces of green china (five feet deep).
4. Porcelain beads (six feet deep).
5. Copper-green enamelled bodkin with Zimbabwe pattern.
6. Soapstone with leaf ornamentation.
7. Three-pronged spear (on bed rock, eight feet deep).
8. Iron hammer (ditto).
9. Soapstone game board.
10. Stone wedge or chisel.
11. Large number of specimens of Phallus.
12. Soapstone miniature bird.
13. Pottery of excellent make, material, and design, with Zimbabwe patterns.
14. Pottery of poor make and design, with crude imitation of Zimbabwe patterns.
15. Painted glass, pronounced by British Museum authorities to belong to the thirteenth century.
16. Portions of copper bangles, spindles, or whorls.
17. Piece of copper, six inches long, a quarter of an inch wide, and an eighth of an inch thick, inlaid with chevron pattern.

In 1889 Messrs. Willie and Harry Posselt, of Zimbabwe, discovered at the ruins—

18. Soapstone cylinder of quern shape, with rings of rosettes on the top and sides, which rosettes are believed to represent the sun, and are common in Phallic decoration. This cylinder, which has a diameter of about nine inches, is considered as undoubtedly Phœnician, and is similar to the one found at the Temple of Paphos, in Cyprus, which was once a leading Phœnician colony. The rosettes or knobs are similar to those on the sacred cone of the great Phœnician Temple of the Sun at Emesa, in Syria (Herodian, bk. v. § 5), and also to the rosette on the Phœnician sepulchral stelæ in the British Museum. (This is in the possession of the South African Museum, Cape Town.)

Mr. Edward Muller discovered in a cave ten miles from Zimbabwe—

19. Wooden platter (see frontispiece of Mr. Bent's work) or dish, thirty-eight inches in circumference, showing a number of zodiacal and other astronomical signs—Gemini, Leo, Virgo, Libra, Scorpio, Sagittarius, Capricornus, Aquarius, Sun-image, Orion, Taurus, with a crudely carved crocodile in the centre, which latter is believed to indicate the northern circumpolar constellation. (This is in the possession of the Right Hon. C. J. Rhodes.)

Mr. J. Theodore Bent and Mr. H. M. W. Swan, in June and July, 1891, discovered at Zimbabwe—

*M. 20. Soapstone birds, pronounced by authorities to be similar to the images of the birds sacred to Astarte, and an emblem used in Phœnician worship.

M. 21. Soapstone ingot mould, corresponding, so Mr. Bent avers, to the tin ingot of undoubted Phœnician manufacture, discovered at Falmouth, and which is now in the Truro Museum.

* "Finds" marked "M." are now in South African Museum, Cape Town.

Mr. Selous states that "in Katanga the form of the mould in which the molten copper is run is almost identical in shape with the soapstone mould found by Mr. Bent at Zimbabwe."

M. 22. A large number of soapstone objects representing, both realistically and conventionally, the Phallus, but always with anatomical accuracy, one being marked with rosette, "a sort of trademark by which we can recognise as Phœnician all such objects as bear it" (MM. Perrot and Chipiez.)

M. 23. Soapstone beams decorated with bands of geometric patterns, and rosette, one pattern being chevron. One beam measured fourteen feet three inches in length. These beams are similar, only larger, to the beam in the museum of the Rhodesia Scientific Association at Bulawayo, which was found at Dhlo-dhlo.

M. 24. Small carved stones of altogether foreign rocks marked round with curious lines.

M. 25. Fragments of decorated and plain soapstone bowls, the patterns depicting zebras, a hunting scene with straight procession of animals represented in Phœnician style, ear of corn, sign-lettering, cord, herring-bone, double herring-bone, knobs, or rosettes.

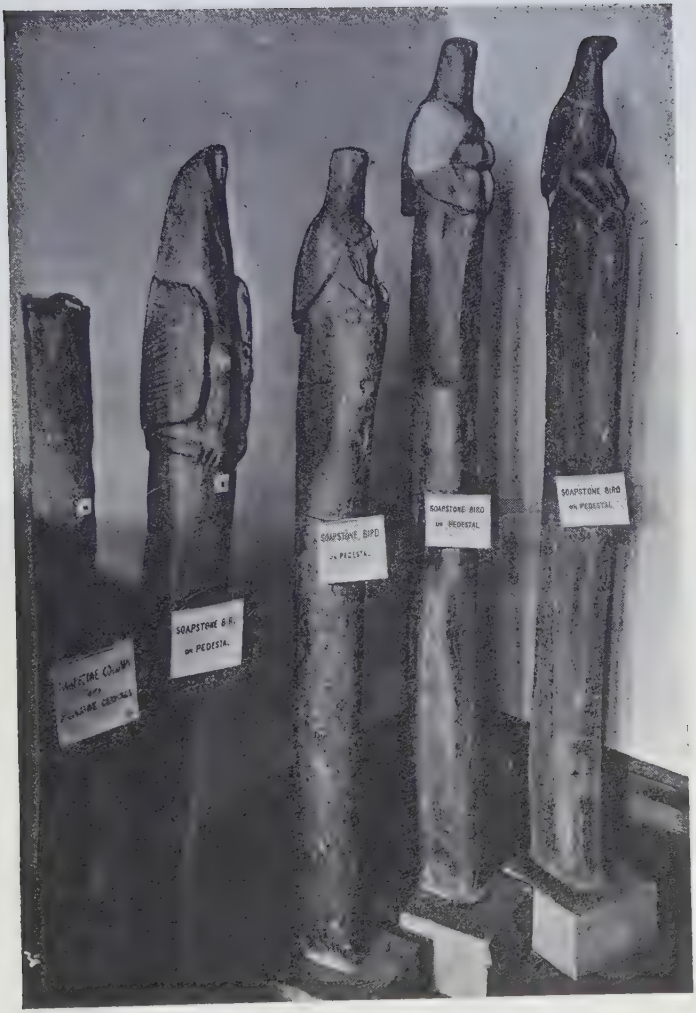
M. 26. Glass beads, Celadon pottery, Persian pottery, and Arabian glass, one bead is believed to be Egyptian of the Ptolemaic period.

M. 27. Pottery, glazed and unglazed, with chevron, herring-bone, and dotted patterns.

M. 28. Clay and shell whorls, pronounced by Messrs. Bent and Bryce to be similar to those found in great quantities in the ruins of Troy.*

M. 29. Assegai or spear, and arrow-heads both of ancient and modern designs.

* Sir John Willoughby writes: "Mr. Bent mentions some clay whorls and also speaks of solar discs, but whether referring to the same objects or not I cannot say. I found several hard clay discs, having a small hole in the centre, but these are without doubt nothing more or less than portions of Kaffir spindles, used by the natives of even the present day in spinning bark fibres and thread made from the wild cotton which is to be found in different parts of Mashonaland."



SOAPSTONE BEAMS WITH BIRDS, ZIMBABWE

South African Museum, Cape Town

M. 30. Three double iron bells in Acropolis, similar to bells found at Congo, also by Messrs. Neal and Johnson at Dhlodhlo and believed by experts to be ancient.

M. 31. Bronze spear-head (identical with those found in Nubia), and battle-axe once plated with gold. These have flutings reversed on either side of the centre.

M. 32. Iron chisels, an adze, pincers, and spades, most of these probably of the Monomotapa or Portuguese period.

M. 33. Portions of ancient crucibles with gold in flux.

M. 34. Stone burnishers.

M. 35. Soapstone goldbeater's hammer.

M. 36. Portions of ancient and modern furnace blow-pipes.

Finder and present possessor unknown—

37. Roman coin of the Emperor Antoninus Pius (A.D. 138). This was formerly supposed to have been found in an ancient shaft, near Umtali, but is now known not to have come from Rhodesia.

Dr. Karl Peters, in April, 1899, discovered among the ruins in the Mount Fura district the following:—

38. Curiously formed stones, which he believed to be betyli. Betyli formed an emblem of religious worship in the oldest Semitic cults.

39. One Phallus.

39*a*. Figure found south of the Zambesi in north-east Mashonaland, and described as follows by Dr. W. M. Flinders Petrie: "Ushabté figure, probably of a courtier of Tahutmes III. Upper part of an Ushabté figure of pottery impressed in a mould. On the head is an elaborate wig, in each hand a scourge instead of a hoe. On the chest is the cartouche of Tahutmes III. (about 1450 B.C.). Three lines of inscription remain below, so much effaced that only the title "Osiris" can be seen; but there is no trace of a cartouche with it. The wig and the scourges in the hands point to this being a figure of the king himself; but his name cannot be traced in the lower inscription. As to the source, the figure is certainly

genuinely ancient, and by its smell it has been buried in moist earth (not in an Egyptian tomb), and has not been kept long by an Arab. All this agrees with the account of its finding."

Professor Keane writes: "Such an object might in the course of 5,000 years find its way through a dozen channels—the Phœnician traders, for instance, or the Sabæans, Minæans, Axumites—to any part of the east coast, and thence to the interior."

Mr. H. Rogers discovered at Dhlo-dhlo—

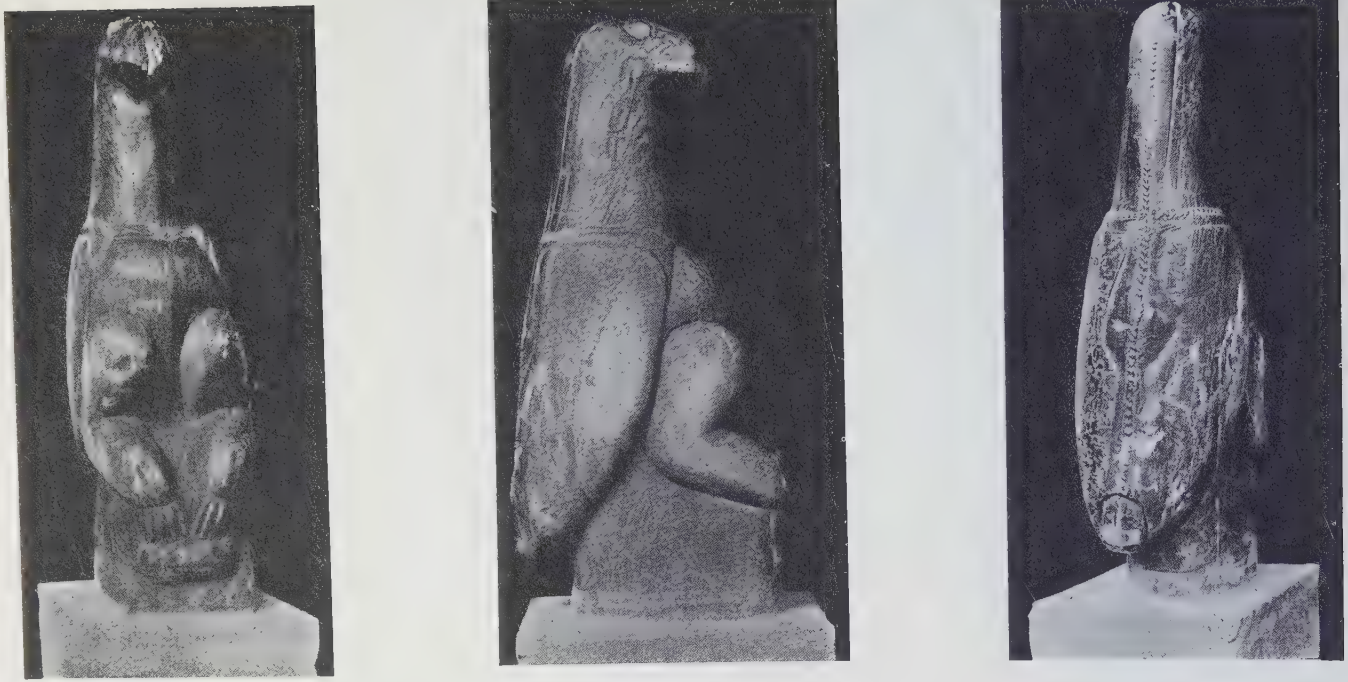
40. Soapstone bar 20½ inches long, 4 inches across front and back faces, and 2½ inches on the sides. This bar tapers somewhat at the bottom end, which, according to Mr. Baines' paintings of similar bars, and Mr. Bent's opinion, was inserted into the tops of the walls, the bar thus standing in an erect position. This bar is carved on all sides to half-way down its height with chevron, dotted, and other geometrical patterns. Mr. Bent and other writers believe such bars to be small gnomons used by the ancients in making solstitial or astral observations. This bar is now in the museum at Bulawayo. Several other similar bars have been discovered, but their present possessors are unknown.

Messrs. Neal and Johnson have made the following discoveries. Their "finds" are mentioned under the heads of the ruins in which they were found, and each "find" is placed, of course tentatively, under conjectured Zimbabwe periods, Monomotapa period, and Portuguese period respectively.

Dhlo-dhlo Ruins.

Probable Zimbabwe Periods.

41. Many ounces of alluvial gold, the largest piece weighing 6 ozs. This was in all probability brought here from some distance.



FRONT, SIDE AND BACK VIEWS OF SOAPSTONE BIRD, ZIMBABWE

42. Several bronze spear-heads, the metal containing an alloy of gold.

43. Gold bead weighing 17 dwts., carved to the core with chevron pattern.

43*a*. Portions of ancient gold crucibles showing gold freely in flux.

44. Solid gold beads.

45. Twisted gold-wire basket-work.

46. Many clay whorls with Zimbabwe designs.

47. Gold tacks.

48. Portions of beaten gold.

49. Pieces of gold wire.

50. Portions of gold chainwork, which if put together would make four feet in length.

51. Large gold bead weighing 2 ozs. 14 dwts.

52. Pellets of gold.

53. Gold beads in various stages of manufacture.

54. Portions of gold-wire bangles.

55. Cakes of smelted gold.

56. Portions of pottery of excellent workmanship and with Zimbabwe designs.

57. Portions of soapstone bowls with herring-bone pattern.

Probable Monomotapa Period

58. Twisted copper-wire basket-work.

59. Twisted iron-wire bangles of several designs.

60. Solid iron bangles.

61. Copper nails.

62. Iron nails (made of wire).

63. Blow-pipes showing copper stains on nozzles.

64. Iron hoes.

65. Iron wedges, axes or chisels.

66. Iron chain.

67. Copper crucibles.

68. Iron slag in quantities.

69. Solid twisted copper bangles.

69*a*. Double iron bells.

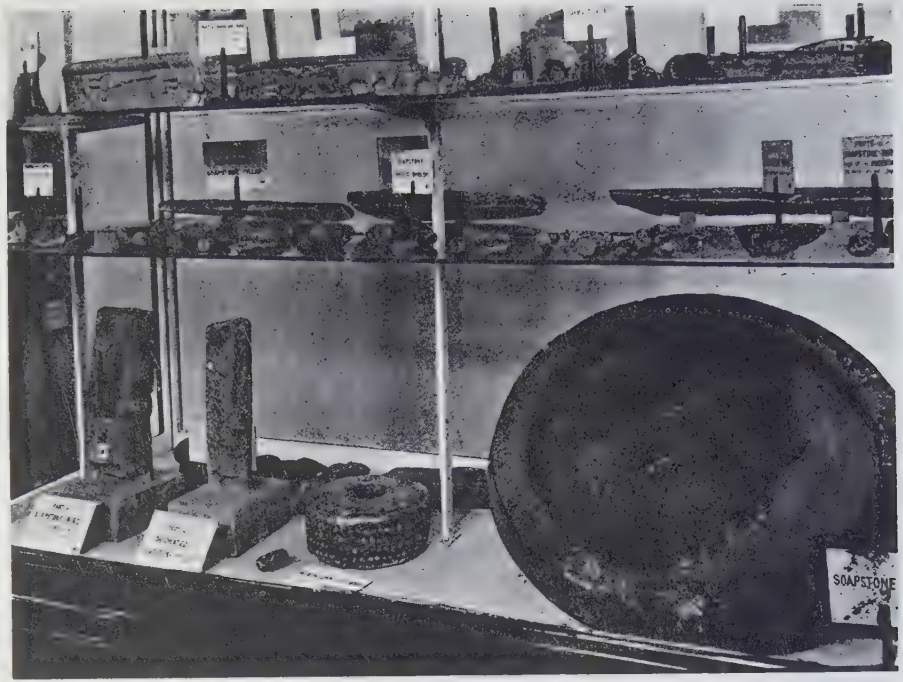
70. Plain copper bangles.
71. Copper bangles with herring-bone pattern.
72. Twisted copper-wire bangles.
73. Ditto, threaded with copper beads.
74. Lumps of smelted copper.
75. Bars of copper.
76. Copper plates.
77. Iron arrow-heads (fused).
78. Large and small copper beads.
79. Iron spear-heads.
80. Ivory beads.
81. Ivory cylinders with Zimbabwe patterns.
82. Copper needles.
83. Bar of iron with gravitating holes for drawing gold wire ; piece of gold wire still remaining in one hole.

Portuguese Period (sixteenth and seventeenth centuries).

84. Lead bullets.
85. Three old barrels of flint-lock muskets.
86. Portion of brass bugle or trumpet.
87. Two cannons : one bronze breech-loader, one iron muzzle-loader, both with Portuguese coat-of-arms. (The Right Hon. C. J. Rhodes.)
88. Gold coin or medallion, size of five-shilling piece, embossed on one side with two birds fighting over a heart. (Last in the possession of Dr. Jameson.)
89. Silver twisted-wire bangles.
90. Silver, threaded with silver beads.
91. Many pieces of raw silver.
92. Large lumps of smelted lead, 60 lbs. in all.
93. Large elephant tusk.
94. Portions of bar silver.
95. Portions of clay-pot lids, with handles.
96. Ostrich egg, bored.

Jesuit Priest's belongings.

97. Section of bronze bowl, size of ordinary washing basin. (Captain Rixon.)



RELICS DISCOVERED AT ZIMBABWE

South African Museum, Cape Town

98. Bronze Egyptian oil lamps.
99. Portion of bronze incense censer.
100. Portion of bronze key.
101. Portions of bell metal.
102. One bell with handle.
103. Priest's private seal. (The Right Hon. C. J. Rhodes.)
104. Three feet of gold chain, broken; part of priest's regalia, with mass of molten silver attached, probably the cross.
105. One pair gold earrings, comparatively modern.
106. Portion of gold brooch.
107. Large silver buckle.
108. Section of silver plate embossed with vines, probably Sacrament plate.
109. Pieces of silver plate, embossed.
110. Sections of china, possibly Dresden.
111. Sections of finely glazed china bowl.
112. Sections of pottery of comparatively modern manufacture.
113. Sections of glass, apparently frosted with silver.
114. Coloured beads—carmine, blue, green, white, etc.

UMNUKWANA.

Probable Zimbabwe Periods.

115. Gold sun-image, complete.
116. Gold bead, weighing 1 oz. 14 dwts.
117. Fifty gold beads, 2 dwts. each.
118. Several ounces of smaller gold beads, assorted, different shapes and sizes.
119. Piece of beaten gold, eight inches long.
120. Gold tacks.
121. Fine gold-wire bangles, seventeen strands, weighing 3 ozs. 16 dwts.
122. Gold, flat-shaped bangle, with chevron pattern. (Mr. J. Withers Gill.)
123. Gold disc, with bevelled edges, size of a threepenny piece; plain.

124. Portions of gold crucibles, showing gold in flux.
125. Portions of blow-pipes, with gold on nozzles.
126. Two gold bangles, child's size.
127. Pieces of gold chain.
128. Pellets of gold.
129. Gold-dust.
130. Portion of soapstone bowl, with single herring-bone pattern.
131. Portion of soapstone bowl, with double herring-bone pattern.
132. Clay lid for a pot; exact shape of a maiden's breast.
133. Soapstone game board.

Monomotapa Period (?).

134. Copper ingot.
135. Copper beads.
136. Copper wire.
137. Copper bangles, with herring-bone pattern.
138. Copper crucibles.
139. Iron hoe.
140. Rubbing or polishing stones.
141. Corn-grinding stones.
142. Copper needle, two inches long.
143. Iron punch, four inches long.
144. Copper chain links.
145. Iron chain.
146. Iron arrow and spear heads.

MUNDIE RUINS.

Probable Zimbabwe Period.

147. Twelve gold bangles, average weight 6 ozs.
148. Gold bead carved with chevron pattern, weight 1 oz.
149. Gold bead, weight ½ oz. (Dr. Sauer.)
150. Sixty-seven gold beads, fifteen to an ounce.
151. Small gold beads.
152. Gold tacks.
153. Fifteen pieces of beaten gold.

WOODEN BOWL WITH SIGNS OF ZODIAC
FOUND NEAR ZIMBABWE

"FUKO-YA-NEBANDGE," THE MASHONALAND RELIC,
DISCOVERED NEAR ZIMBABWE

154. Gold crucibles showing gold rich in flux; these in great quantities.
155. Portions of gold bangles.
156. Portions of gold wire.
157. Blow-pipes, showing gold on nozzles.
158. Five ancient gold-smelting furnaces.
159. Gold pellets.
160. Gold chainwork.
161. Cakes of gold, one still remaining in the crucible.
162. Soapstone game board. This is the best specimen yet found.
163. Soapstone bowl with herring-bone patterns.
164. Copper nails.

Monomotapa Period (?).

165. Copper crucible (deeper than those used by the ancients).
166. Iron hoes.
167. Iron spear-heads.
168. Iron bangles, solid.
169. Iron-wire bangles.
170. Copper bangles.

M'Telegwa Ruins.

Probable Zimbabwe Periods.

171. Many gold crucibles showing gold in the flux.
172. Two solid gold bangles, herring-bone pattern.
173. Three ferrules of gold, probably for rods or sticks of office.
174. Ten gold bangles, average weight 1 oz. 8 dwts., some with gold beads at intervals.
175. Eleven caps of beaten gold with sun-image embossed.
176. About three hundred gold beads, weighing fifteen to the ounce.
177. Gold tacks, weighing 3 dwts. each.
178. Two large pieces of beaten gold.
179. Gold wire.

180. Gold pellets.
181. Blow-pipes, showing gold on nozzles.
182. Six square-shaped gold beads.
183. Portion of wooden pillow worked with gold wire in chevron pattern.
184. Pieces of pottery found with ancient skeletal remains.

Monomotapa Period (?).

185. Copper ingots (portions).
186. Lumps of smelted copper.
187. Portions of cloth, interwoven with gold wire.
188. Copper beads.
189. Copper wire.
190. Copper-wire bangles, with copper beads at intervals.
191. Copper-wire bangles, with gold bands at intervals.
192. Portions of iron bangles, with gold bands at intervals.
193. Iron hoes.
194. Pottery of later date.

Chum Ruins.

Probable Zimbabwe Periods.

195. Golds beads, smallest averaging 1 dwt. each.
196. Two small double-twisted gold-wire bangles.
197. Portions of gold crucibles, showing gold in the flux.
198. Portions of gold chain.
199. Gold tacks.
200. Gold wire.
201. Beaten gold.
202. Gold-dust.
203. Gold beads in several stages of manufacture.
204. Pieces of smelted gold.
205. Soapstone game table.
206. Pottery of best manufacture, and
206*a*. Stone whorls, with Zimbabwe patterns.

RELICS IN MUSEUM, BULAWAYO (I)

1. *Stone on which gold-quartz has been crushed*
2. *Flint, conjectured to be a portion of an ancient axe*
3. *Ancient quartz crushing hammer*
4. *Carved stone*
5. *Iron trowel*
6. *Soapstone tablet*
7. *Pottery stopper*
8. *Soapstone tablet*
9. *Copper Bar. Three discovered*
10. *Pottery lid, representing female breast*
11. *Sea shell*
12. *Coral*
13. *Cast of golden sun-image*
14. *Glazed pottery*
15. *Pottery bowl*

Monomotapa Period (?).

207. Copper finger-ring.
208. Copper-wire bangles, with fibre still in centre.
209. Copper beads.
210. Copper needles.
211. Copper wirework in basket form.
212. Portions of iron bangles overlaid at intervals with gold bands.
213. Iron arrow-heads.

KHAMI RUINS.

Probable Zimbabwe Period.

214. Gold tacks.
* A.B. 215. Pieces of beaten gold.
216. Numerous pellets of gold, ranging in size from No. 6 shot to peas.
A. 217. Several bunches of fused gold beads.
A.B. 218. Gold beads.
A. 219. Gold chainwork.
220. Small gold disc, with hole in centre.
A. 221. Gold beads with facets.
B. 222. One piece of thick gold wire.
223. Several fairly large gold beads, split in process of punching.
B. 224. Piece of beaten gold, showing stamp or hammer marks.
A. 225. Portions of crucibles, showing gold in flux.
226. Beads in several stages of manufacture.
B. 226*a*. Gold finger-ring (unwelded).
227. Gold dust.
A. 228. Flint spear-heads (conjectured).
A.B. 229. Numerous flint objects.
A. 230. One ivory stylo.

* "Finds" marked "A." are in the possession of Mr. J. Withers Gill, of Bulawayo. "Finds" marked "B." are in the possession of Mr. R. N. Hall, of Bulawayo.

B. 231. Diorite and granite balls and grinding stones.

A.B. 232. Pottery (some probably ancient), with Zimbabwe designs.

Monomotapa Period (?).

233. Large piece of copper alloyed with gold.

A. 234. Pieces of smelted tin.

A. 235. Fused tin beads.

B. 236. Copper beads.

B. 237. Portions of copper bangles.

238. Copper finger-ring (unwelded).

B. 239. Bronze finger-ring.

B. 240. Piece of bevelled jasper, evidently from signet ring.

B. 241. Clay whorls.

242. Iron wedges or chisels.

243. Portions of copper crucibles.

B. 244. Portions of iron bangles.

245. Several complete iron bangles.

246. Copper needles, one threaded with copper wire.

247. Porcelain heads.

248. Ivory and bone cylinders, with Zimbabwe markings.

249. Comparatively modern pottery, probably of Portuguese period.

B. 250. Quantities of pottery of all qualities and designs, Zimbabwe patterns being predominant.

REGINA RUINS.

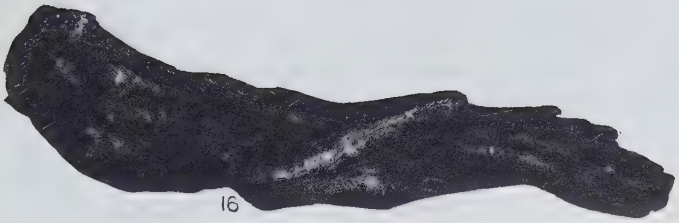
251. Gold beads, gold chainwork, gold bangles, smelted gold, 15 ozs. of alluvial reef-gold in nuggets, weighing from one quarter to half an ounce each, discovered at Regina Ruins in 1894 by Messrs. H. Sauer, W. Sampson, and B. Bradley.

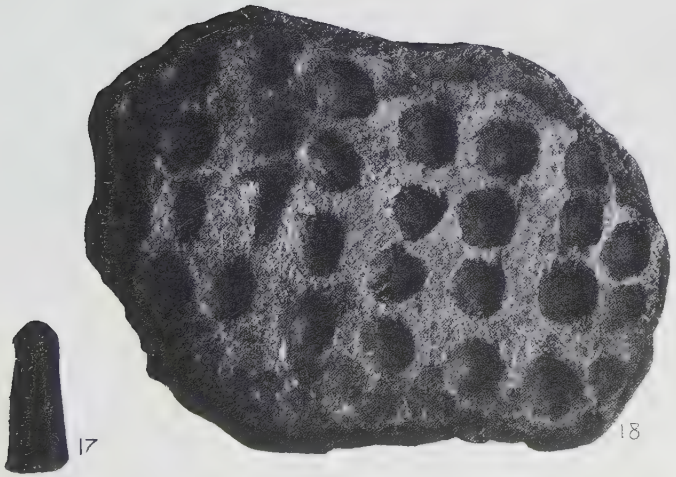
* 252. Isafuba game-stone (see Chapter vi.).

* 253. Phallus.

* 254. Flint (conjectured axe-head).

* In Museum, Bulawayo.





RELICS IN MUSEUM, BULAWAYO (II)

16. Timber from mediæval gold workings
17. Phallus
18. Isasuba Game-stone (ancient). Soapstone

The skeletal remains of forty undoubted ancients, discovered by Messrs. Neal and Johnson, are described in Chapter viii.

It must be remembered that the first-period ruins must have been ransacked, except the graves of the first ancients, by the reoccupiers of the second, third, and fourth Zimbabwe periods, also that the natives have used many of these ruins for their copper- and iron-smelting operations, and these have taken what ancient relics lay on or near the surface. Natives have been found with ancient relics in their possession. An instance of this is given by Mr. Harry Posselt at the conclusion of his description of the finding of "Fuko-ya-Nebandge," which follows.

The Nankin and Persian china are believed by Mr. Bent to have been brought into the country by the early Portuguese. These, with the pieces of coloured glass, have been most frequently discovered in Portuguese forts, especially at Tete and other places occupied by the Portuguese.

In the more ancient débris heaps and under ancient cemented floors are horns of very small oxen—short-horned—smaller than Guernsey cattle, and probably the breed from which the present Zambesi cattle originated. These were preserved by the cement-work by which they were hermetically sealed from the action of the weather. Long-horned cattle were not introduced into South Africa till late in the seventeenth century.

COPPER INGOTS.

The crossbar of copper found by Messrs. Neal and Johnson at M'Pateni ruins is in shape something like a double-headed claw hammer-head, and is about five inches in length. Mr. J. Withers Gill believes it was an eastern symbol of the Equinox. Three of such copper bars exactly identical in pattern have

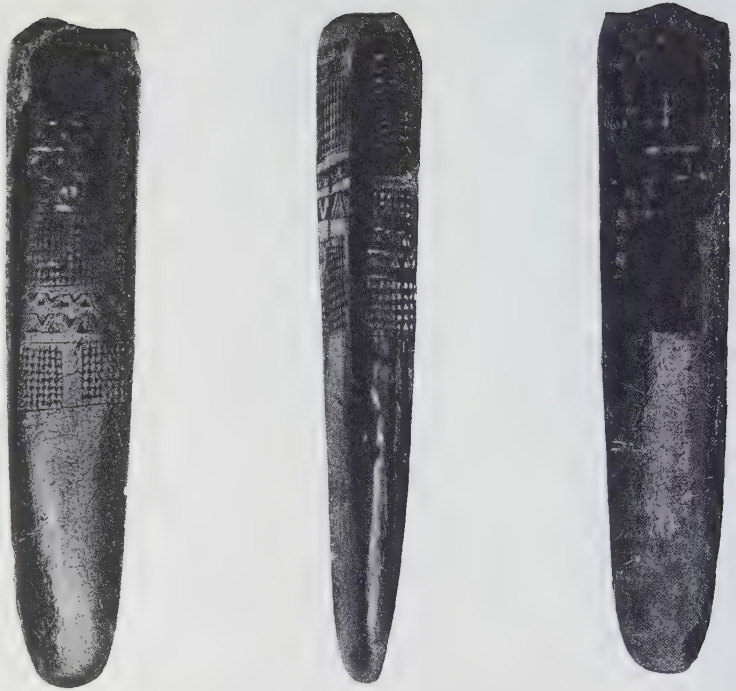
been found, one being obtained in the Mazoe district by the Rev. Father Richardt, and one was found in 1891 near Victoria and handed to Dr. Rutherfoord Harris. It should be borne in mind that the Arab writers of the thirteenth century state that copper was extensively brought to the country for purposes of exchanging it for gold; further, the ancients are known to have mined for copper in several parts of Rhodesia, and also that even recently natives have also worked for copper. At any rate, these copper bars are the centre of scientific controversy.*

POTTERY.

With regard to the pottery discovered, it would hardly be safe at present to theorise, except with regard to that of undoubted Phœnician semblance which has been found at Zimbabwe. The red and black colours of the pottery appear to have been obtained by the employment of hematite and plumbago. The quality of the clay and the workmanship of the geometric patterns vary considerably, but it must be admitted that the finest specimens have always been discovered on or close to the original floors of the ruins.

All the pottery appears to be hand-made, there being nothing in them betraying an acquaintance with the potter's wheel. In the majority of instances the primitive ceramic art is crude, harsh, and lacking proportion, as if painfully trammelled with conventionality, and exhibits a poverty of

* The Report of the Administrator of North-Eastern Rhodesia, March 31st, 1900, states: "Ingots of copper, cast in the form of a St. Andrew's cross, weighing from 10 to 15 lbs., are common articles of trade, and point to this mineral being present, in the Katanga country at any rate, in considerable abundance." Mr. Selous some years ago discovered considerable quantities of copper ingot moulds at Katanga almost identical in shape with the ingot mould discovered by Mr. Bent at Zimbabwe. The ingot mould discovered by Mr. Bent has lately been examined on behalf of the authors, and though powerful glasses were used, no traces of its having been used for moulding gold could be discovered upon it. (See p. 128, also "Find" 21, p. 141, and Appendix, note C.)



SOAPSTONE BEAM DISCOVERED AT DHLO-DHLO RUINS

invention and detail, with an utter absence of any great range of colouring.

The question of definite classification of the pottery is one which may be considered as ripening for discussion, and its treatment by antiquarian experts would require a volume for its proper argument.

"FUKO-YA-NEBANDGE"—A MASHONALAND RELIC.

This relic possesses a unique history and a weird romance, and is also of great intrinsic value for such in Rhodesia as revel in researches into the history of past occupiers of this country. The image is made of pottery, and is hollow, the head (which has not been discovered) forming the stopper. It was discovered by Mr. Harry Posselt in a cave near Zimbabwe. It stands eleven inches high, and is about sixteen inches long, and is marked with geometric exactness with zebra stripes all over its body. The pot is black, but the stripes are of a dull red colour. The name of it is "Fuko-ya-Nebandge" ("the king's favourite adviser"), and for at least some generations of Makalangas it has exercised a potent magic spell over the minds of the natives. It has now been secured for the Museum at Bulawayo.

The following is Mr. Posselt's account of its discovery:—

In 1891 he was encamped at Fern Spruit, south of Victoria, near which point are some hills. His Mashona boy informed him that among these hills could be heard by anyone going near them the sound of cattle bellowing, girls talking and singing, and that up on the hills was a pot full of beads, but the local natives were too much afraid of venturing up there in search of the pot, as it would mean certain death. He did not ascend the hills, but his drivers and leaders went up, but heard and saw nothing unusual. Until 1899 he had quite forgotten the incident, but in August of 1900 he

happened to be near these particular hills collecting labour for the Chamber of Mines, and conversed with a chief living there. He asked the chief the native name of the hills, and the chief told him about the pot containing the beads. He further told him that long ago a native went out hunting on the hills, and found the pot with the beads in. The chief's story was to the effect that the native seeing the pot wanted to take the beads out, and putting his hand into the pot, the pot got hold of his hands and he could not shake it off, and he was obliged to carry the pot poised on his head with his hand still fixed inside it. When he arrived at the kraal his people prevented him entering it, as he might bring evil upon the tribe. He was consequently compelled to encamp on a stream near the kraal until his hand dropped off. He was fed secretly by some of his people. After his death, instead of being buried in the usual way, they pushed him with long sticks into a cave.

The pot was left there for some considerable time afterwards, and it was eventually discovered in another cave in the same hills, and was regarded, and still is to this day, by the natives as a mystery, and held in awe by them, and their belief was that if anyone approached the cave he would die. If the pot changed its colours to dark red it meant certain death.

After he had secured the pot the natives came from near and far to see it. One old native then told him of another pot, made like a mare zebra, and that "female pot" contained beads that glittered, and that the pot in his (Mr. Posselt's) possession was the "male pot." The native was ignorant of what gold was. The two pots, so he stated, used to travel by themselves from their cave to Fulachama, a distance of eight miles, to obtain water from the stream where they drank, coming and going so often as to make a path. The name of Mr. Posselt's pot is, according to native tradition, Fuko-ya-Nebandge, which means "the king's

favourite adviser." This Kaffir asked where the "female pot" was, well knowing Mr. Posselt had not found it.

After his discovery he went to a chief who lives close by to where the pot was found. This chief used to live in Zimbabwe. He said that the chief who now lives in Zimbabwe was an enemy of his, and had supplanted him, and that he had all the relics. To compel him to disclose the place where the relics were hidden he resorted to torture, cutting off women's breasts and putting nose reins through men's noses. Before the ex-Zimbabwe chief was expelled from Zimbabwe he was in the habit of offering up sacrifices of black oxen, and on each occasion used to collect and display relics taken from the ruins. These consisted of "yellow metal with sharp points" brought down from the top ruin, also a yellow stick about three feet six inches long with a knob on it, also a bowl or dish, by information most probably of silver. The stick is now stated to be in the possession of the chief.

CHAPTER XII

ARCHITECTURE AND CONSTRUCTION OF ANCIENT RUINS IN RHODESIA

[This chapter was prepared by Messrs. Hall and Neal at the request of the Council of the Rhodesia Scientific Association and was read before the members on the 6th February, 1901.]*

Definition of "Ancient Ruin."—"Ruin of fort, temple, or other building exhibiting examples of architecture of one or more of the Zimbabwe periods."

THE European student of architecture, to entertain any adequate idea of the more than five hundred ancient forts and temples of Rhodesia, must first dismiss from his mind all conceptions of the features represented by the Tudor, Gothic, Roman, Grecian, and Egyptian styles of architecture.

The Rhodesian ruins, it is held, date back to times long before Rome was known on the Tiber, even before the kingdom of Phœnicia had planted its colony near Memphis —whose ruined temples and palaces are to-day among the marvels of Egypt—to those days before the Palm Land of the eastern Mediterranean became settled (3000 B.C.) by that branch of the nature-worshipping Semitic family whose influence afterwards extended, in religious faith, commerce,

* This chapter does not deal with the ruins in Mount Fura and Inyanga Districts, for descriptions of which see Chapter xxv.

and civilisation, even to the remotest parts of the then known world.*

In Rhodesia the ancient architecture provides no sculptured columns and ornate capitals, no arches, and no basilica, but sacred cones and rudely carved Phallic monoliths and elliptical buildings, "open to the light of heaven."

The main features represented by the ruins of Rhodesia, of the first period of its architecture, are those of massive strength, enormous solidity, monotonous plainness and similarity, complete symmetry, and most excellent workmanship, inspiring in their grand silence—maintained, it is held, for well-nigh four thousand years—a far deeper spirit of awe in the mind of the beholder than do the more modern styles of either Greece or Rome. The walls, in some instances, are so massive that on their present summits might be placed an ox-waggon and team of sixteen oxen, with room to spare.

Many of the ruins recently discovered present altogether new features both in design, construction, and material to those ruins which have been mentioned in the works of either Mr. Bent or Dr. Schlichter, and as fresh ruins are still being constantly discovered, other and newer features and peculiarities are likely to be added to those already known.

Therefore, until the examination of all the ruins is completed, no absolutely definite set of principles of Zimbabwe architecture can safely be enunciated. All that it is possible to do is to record all facts concerning the plan, design, and

* Professor Bryce states "there is nothing of an Islamic character about the ruins or the remains found," and he argues that if the ruins are the work of old Arabians they must have been built before Mohammed, and "it is just as easy to suppose that these Arabs came in the days of Solomon." Mr. Bent and Mr. Selous are also emphatically of opinion that the ruins in Rhodesia are pre-Islamic.

Speaking at the Royal Geographical Society's meeting, 24th November, 1890, and previously to making his explorations in Rhodesia, Mr. Bent stated that one of the theories as to the Zimbabwe was that they were erected by migratory Persians during the Sassanian Dynasty, when Kosroes II. carried his armies through all the then known world. Later investigations led Mr. Bent to completely abandon this theory in favour of the successive occupations of Rhodesia by the Sabæo-Arabians and Phœnicians.

construction of each ruin, and when this work is completed the various periods of Zimbabwe architecture will even more naturally reveal themselves than they do at present.

The following are notes on Zimbabwe architecture and construction, founded on the examination of at least two hundred ruins:—

1. *Origin of Architecture.*—The style of architecture of the first Zimbabwe period was, it is held, not originated or developed in this country, but introduced from the mother country of the foreign ancients, at the same time and in the same manner as were their religious faiths, which must have been altogether alien to this country.

The exact similarity of the ruins of the first period in architectural features to those of the Sabæo-Arabian temples is very striking, and points, as suggested in Chapter iii., to the earliest Zimbabwes having been erected by the Himyaritic or Sabæo-Arabian people.

With regard to the second period of architecture, it is somewhat difficult to say whether it was introduced directly into this country or was the result of evolution and development of the old style of architecture. If the former, this might prove an additional argument in favour of the suggested occupation of this country by the Phœnicians, and many consider this period of architecture to resemble Phœnician architecture elsewhere. But if it were the result of evolution in this country, and it is believed that several, if not many, centuries lie between the two periods, then we lack evidence in the form of architecture of buildings of the intermediate period, which in all probability, did they exist, would show the transition stages between the two widely differing types of architecture. (See *Periods* later.)

2. *Geometrical Plan.*—The builders of the first Zimbabwes apparently were marvellously well versed in geometry, and, as is exemplified in the system of curves of walls and the

elliptical form of buildings and their orientation, must have possessed a magnificent knowledge of astronomy, especially of that of the northern hemisphere, and also of the zodiacal science. The solstitial orientations of several ruins in Rhodesia have already been ascertained by Messrs. Bent, Swan and Schlichter, and these show their ages to have been from 1100 to 2000 years before Christ.

3. *State of Ruins.*—The clearness and dryness of the atmosphere and the absence of frosts tend to maintain these ruins in a wonderful state of preservation. The stones being laid without mortar, and the sub-tropical rains washing any dust or soil from the joints in the courses, have prevented, to some extent, such an accumulation of matter as would enable large vegetation to grow on the walls and so cause destruction.

4. *Dilapidation.*—The present ruinous state of these temple forts, or forts, may be accounted for as follows:—

(*a*) The ancients of the third and fourth periods have frequently worked the buildings of the first and second periods as quarries for stone, which they used in erecting smaller and inferior buildings, and in some cases the original buildings have been entirely destroyed, leaving them cleanly cleared of granite blocks down to the foundations.

(*b*) The filling up of the interior inclosures of the original buildings during later periods, stones from the tops of walls being taken till the insides were level with the tops of the reduced walls, when a cemented floor was overlaid, thus burying the original floors of the first and second periods to a depth of sometimes fifteen feet. This practice of filling up inclosures is known, both by the description of the "finds" and the quality of the cement used, to have been the work of the occupiers of the later Zimbabwe periods, for on such cemented floors smaller and inferior buildings of Zimbabwe architecture and construction have been erected.

(*c*) In many ruins trees and roots are bulging out or wedging apart the walls. This is specially noticeable at Zimbabwe, Khami, M'Tendele (wrongly named Matindela), Chum, Umtelekwe, Umnukwana, Zeeri, Lotsani, and Baobab Kop ruins.

(*d*) Most probably earthquakes have assisted to a great extent in the destruction of these buildings, for some of the enormous masses of masonry which have evidently been hurled *en bloc* from the walls of some ruins suggest the effects of earthquakes. This suggestion is strengthened by the traditions mentioned by Arab historians, that a severe earthquake took place in South-East Africa during the fifth century.

(*e*) The vandalism of prospectors, transport-riders, and visitors, who, in search of supposed treasure, have pulled down whole lengths of walls with decorations. This is specially noticed at Tati, referred to by the Rev. Dr. Moffatt some years ago, where every passer-by has done some little amateur exploration work; also at Thaba Imamba, where acts of vandalism are manifest; also at Khami, where in No. 8 Ruin a whole length of herring-bone pattern, together with an ancient rounded buttress of the first period, have been wilfully and utterly destroyed during the last few months. Ruins on summits of precipices likewise suffer, for visitors appear to delight in hurling the ancient blocks over the edges of the precipices to watch them bounding into the depths below. In this way the stone cross, laid probably by the Jesuit missionaries, on the flat boulder in No. 2 Ruin at Khami, has almost disappeared.

(*f*) Though the present natives do not use stones for their buildings, yet, in some cases, they have done a considerable amount of damage to the walls. For instance, when bees have built inside the crevices or some small animal has taken refuge in holes in the walls, they have pulled down portions of the walls to obtain the honey or to secure their quarry.

(*g*) During the last eight or ten years far more damage has been done to the walls of the ruins than during several centuries previously. The baboons have also done considerable injury to the walls in turning over the stones in search of lizards, for which they appear to have a special predilection. Baboons have been shot at Khami ruins, and are very numerous in some parts of the country.

5. *Degree of Durability.*—The poorer construction of the buildings of the third and fourth periods is shown by the fact that these have mostly disappeared, while the ruins of the original buildings of the first and second periods upon which they were erected, or of which they were the extensions, remain practically intact.

6. *First-Period Buildings more Permanent.*—The first-period ruins are to-day more permanent in character than those of the second period. This is in consequence of the superior workmanship in the construction of the first-period buildings, which have the broader foundations, are more massive, and have a decided batter-back both inside and outside of at least one foot in six, with each course bonded from front to back, and this may also be due to the fact that the rising terrace system of buildings of the second period has little or no batter-back on the inside, and the walls, in many cases, instead of being solid for some ten or fifteen feet at the base, are made of stones loosely thrown in behind a single outside course of blocks. Besides, the rounded ends and battered-back of walls solidly built and completely bonded are naturally stronger than almost plumb walls with straight ends.

7. Mr. Swan, comparing the construction of the first and later periods of the ancients, says: "There is a great difference in the durability of the walls; outside it would almost be possible to drive a cart along the better-built part of the outer wall; one can only creep along the top of the worse-

built portion while risking a fall. In one case the walls are built in regular courses, and *the stones are most carefully packed in the whole thickness of the walls;* the other, though sometimes having the exterior courses laid with some regularity, *are most carelessly built in their interior.*"

8. *Periods or contemporaneous types of architecture and construction: Which?*—Taking into consideration that in Rhodesia we find two distinct classes of ancient architecture and construction, apart from those of any of the decadent periods, it may naturally be asked if these are but differing styles of architecture employed contemporaneously by the ancients of the same period, or are they distinct from each other in point of time?*

This question, so far as the examinations of some two hundred ruins have been made, can be best answered as follows:—

(1) That, admittedly, there are two principal styles of architecture and construction as defined later, each possessing its peculiar characteristics not met with in the other.

(2) That the original buildings of these two types of architecture and construction occupy almost distinct areas in the mediæval country of Monomotapa.

(*a*) The first-period buildings are found on the east, south-east, and south of a line drawn from the north of Zimbabwe to the north-west of the Matoppas, with the exception of a few ruins overlapping on the western side of this line, as, for instance, the ruins described in Chapter xxi., and No. 8 and other ruins at Khami. This area extends to a point on the Sabi River within Portuguese territory.

(*b*) The original buildings of the second or terraced type of architecture are to be found to the north, north-west, and west of this line, extending from and including Inyanga (if not as far north as to include the ruins of Mount Fura

* See Authors' remarks on *Periods* in the Preface.

district), down in a south-westerly direction to the western border of Bulalema district, south-west of Bulawayo, including on its way the large number of important terraced ruins of Upper Insiza, Khami, and Bulalema.

(*c*) The second-period architecture is also to be found in the shape of most obvious extensions of, and additions to, the first-period buildings in the area in which the original buildings are only those of the first period, and these additions and extensions, as will be seen in the descriptions given later of the respective ruins, are generally built over and upon the original erections.

(3) The area occupied by the first-period buildings is that nearer to the coast, and would in all probability be the first portion of the country to be occupied by the ancients.

(4) The absence of any original buildings presenting together the features of the architecture of the first and second periods, or buildings with architecture of an intermediate or transitional period.

(5) There are also other evidences that the terraced buildings, beside being as a rule inferior in construction, as shown later, are of a subsequent period to those built at the Great Zimbabwe.

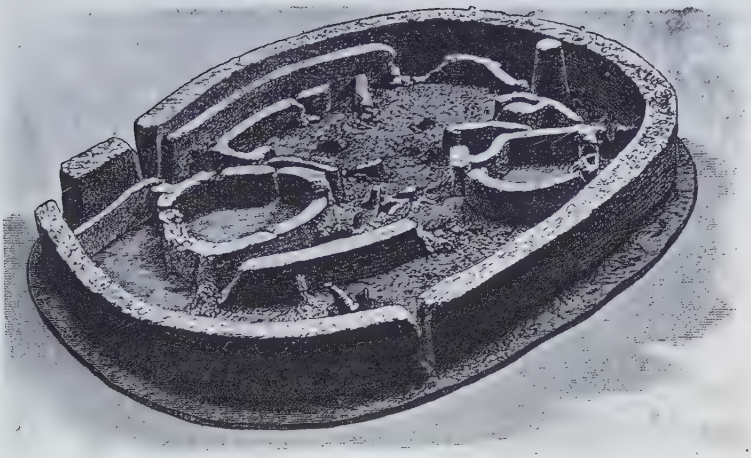
(*a*) Every archæologist who has written on the subject of the ancients emphatically asserts that ruins seen by them and which they mention by name show several, or at least two periods, if not three periods of architecture and construction;* and the terms "*best period*," "*original period*," "*later period of ancient building*," "*decadent period*," and similar terms to describe differences of architecture and construction are very frequently employed by them. Mr. Bent further suggests that in the later period the ancients did not practise solar worship, or did not do so under the

* The reports of Mr. J. Hays Hammond and of several gold-mining engineers contain statements to the effect that the ancient workings show clearly that some of these workings were mined by the ancients at different periods, and these statements have no reference to mediæval Portuguese and Kaffir operations.

original forms. Further, Mr. Bent states, "*We find two periods side by side at the Great Zimbabwe, also we have them scattered over the country*"; also, "*later walls are wanting in some of the essential features of the original walls.*" At the following ruins (*inter alia*) there are additions of second-period buildings built over and upon and also extending the original erections of the first period: Thabas Imamba, Lower Longwe, Copper Ruins, Tagati, Chum Ruins, Lumeni, Dhlo-dhlo, N'Natali, Choko, Mudnezero, Wheel of Fortune, M'Tendele, portions of Great Zimbabwe, and several unnamed ruins in M'Pateni. Mr. Bent also points out that M'Tendele was "constructed by the same race (the builders of the Great Zimbabwe) at a period of decadence, when the old methods of building had fallen into desuetude." Here, he believes, the superstructure of the decadent period rests on foundations of an early Zimbabwe period. Mr. Bent also says, "Sir John Willoughby . . . made it abundantly clear that *at Zimbabwe the buildings are of many different periods, for they show more recent walls superposed on older ones.*"

(*b*) The gold ornaments found on the original floors of the first-period buildings are massive and absolutely solid, and are found in far greater profusion than in the second-period buildings. Gold ornaments with Zimbabwe patterns have, so far, only been found in the first-period buildings. Copper and iron ornaments have not hitherto been found in first-period buildings, except those extended during the second or later period.

(*c*) Both in the original buildings of the second period, and on the higher floors of first-period buildings which have been added to by buildings of the second period, the ornaments are much scarcer and poorer in make and value; for instance, copper and iron bangles with gold bands or gold beads at intervals. Small gold beads may sometimes be found. No gold-smelting furnaces have so far been discovered in any



MODEL OF ELLIPTICAL TEMPLE, ZIMBABWE

BROKEN WALL OF SECOND PERIOD ARCHITECTURE SHOWING ROUGH FILLING IN BEHIND OUTER COURSES

second-period building. The great difference in the quality, value, and amount of finds in these two classes of buildings was so pronounced that Messrs. Neal and Johnson, though at first paying equal attention to ruins of both classes, were constrained by their experiences to devote the rest of their five years' exploration work to ruins of the first period only.

(*d*) It can further be shown that the ancients who occupied the first-period buildings most extensively employed the gold won from their workings in the manufacture of gold ornaments and articles of use, while in the later period most of the gold appears to have been exported in the form of gold-dust. This may be explained by a closer intercourse having arisen between Sofala and the countries both of the Indian Ocean and Mediterranean Sea, which in all probability was developed by the later adventurous maritime and commercial expeditions of the Phœnicians, and by the increased demands of the Phœnician colonies for gold, which sacred and secular history affirm became rich in gold; as also by the increase in the standard value of gold which occurred in those times.

(*e*) It is a common remark of all the archæologists that the Rhodesian ruins visited (those described by them are mostly of the first period, though second-period ruins are also described) are notable for evidences that the first object of the ancients was protection, and they point to the massive walls, narrow entrances buttressed for defence, and labyrinthine passages again protected by buttresses and transverses. These are the chief characteristics of first-period buildings. In the second-period buildings the entrances are straight and open directly into the interior of the building. One writer has suggested that this might be explained by a stronger hold having been secured at a later period over the native races, and therefore the reason for complicated defences had become somewhat obviated.

(*f*) Archæologists agree that the elliptical temple at Zimbabwe is the most ancient form of architecture extant in

Rhodesia, and it is from "the original portions" of this temple that the style of the first period of Zimbabwe architecture is deduced. Messrs. Bent and Swan, also Dr. Schlichter and other writers, in all their descriptions of ruins always compare each to the standard of plan and construction employed in the building of the Great Zimbabwe.

Therefore in this work we follow on the lines of other writers, but with additional and more important evidences than they possessed to warrant us in so doing, and shall speak of these two classes or types of architecture as belonging to two different periods of the ancients, viz. as the first and second Zimbabwe periods.

9. *First period.* — The chief characteristics of the first Zimbabwe periods are—

(*a*) Massive solidity and symmetry of the buildings, the walls being on broadest foundations averaging from five feet to fifteen feet, according to the size of the building, with tops averaging from three feet six inches to seven feet in width, and the summits, when not reduced by dilapidation, being paved with granite slabs.

(*b*) Decided batter-back of walls at least one foot in six feet, both outside and inside of main walls, less batter-back of divisional walls.

(*c*) Main and divisional entrances and ends of walls are rounded,* and in many cases have buttresses, the passages into the interior being intricate and defended in many ruins of this period by other buttresses.

(*d*) Walls are built on curved lines or on elliptical plan, straight walls, except divisional walls, being almost always absent.

(*e*) Foundations of main walls all go down to rock formation and follow the surface outline.

* Mr. Bent (p. 128) considers rounded-off entrances belong to the oldest period.

BROKEN WALL AT ZIMBABWE, SHOWING BONDED COURSES
OF FIRST PERIOD ARCHITECTURE

(*f*) No rectangular main walls, though divisional walls run at all angles from the inner side of main walls.

(*g*) The workmanship is of the most superior quality, and is the same both inside and outside, and in some ruins there are ornamental patterns on the inside walls as well as on the outside. There are no false courses in buildings of the first period. The walls are bonded throughout their whole width, the internal stones being carefully laid.

(*h*) The inclosures have not been filled in with stones and débris except in cases of reoccupation.

(*i*) The finest granite-powder cement for floors was used by the ancients. This cement deteriorated in quality and thickness with each succeeding period. In the early period this cement was always beautifully smoothed and glazed.

(*j*) Drains, as at Zimbabwe and Mundie, are only so far found in the first-period ruins.

(*k*) Steps are not a very general feature of first-period ruins.

(*l*) Cones and conical buttresses with platforms on their summits are so far only found in first-period ruins.

(*m*) First-period ruins are frequently found located on low knolls rising from the level of the country.

10. *Second period.*—The chief characteristics of the second Zimbabwe period are—

(*a*) The walls have not such a marked appearance of massive solidity as those of the first period, and the width of the walls at their bases is also very considerably less, in most instances not exceeding three feet.

(*b*) Less batter-back on outside of main walls, none inside; as, for instance, Dhlo-dhlo and Khami.

(*c*) Main and divisional entrances and ends of walls are squared and not rounded, and are comparatively plumb. The main entrances open directly into the interior of the building.

(*d*) Walls, both main and divisional, are built upon comparatively straight lines.

(*e*) Foundations of main walls frequently do not reach rock formation, though the rock is within a possible distance of two or three feet. In the terraced walls the foundations are laid on rough granite blocks, not more than eighteen inches to two feet from front to back.

(*f*) Right angles in main walls are prominent and general.

(*g*) The workmanship in the masonry, though on the whole good, does not equal that of the first period. The outside walls show good work, but the inside walls are most inferior and are without decoration. False courses are frequent. The courses are not bonded, and the interior of the walls are carelessly built; the stones between the two faces seem to have been thrown in anyhow. (Messrs. Bent and Swan and all later writers allude to this feature.)

(*h*) The presence of the rising-terrace plan of building, generally tiers surrounding and often completely covering the summit of a kopje. Numerous retaining walls of a very shell-like construction, the withdrawal of the facing block generally showing the rubble thrown in behind to fill up. The foundations of these retaining walls most frequently rest on the soil.

(*i*) A greater profusion of decoration on the outsides of main walls and on the faces of the terraces, which is most elaborately carried out, this being mainly check pattern.

(*j*) No drains have so far been found in second-period buildings.

(*k*) Steps made of granite blocks and cemented over are a common feature of this period; almost every terrace appears to have had at one time its flight of steps.

(*l*) Second-period buildings are most frequently located on the summits of high kopjes.

(*m*) During the second period many buildings undoubtedly of the first period have been added to and extended by buildings representing all the features of the second period.

SECOND PERIOD WALL. No. 5 RUIN, KHAMI

It must be borne in mind that in dealing with the buildings of the third and fourth periods we can only very tentatively classify these in accordance with their apparent sequence in age.

11. *Third period.*—True circular and octagonal buildings with comparatively plumb walls built of larger blocks of stone. These are mainly protecting forts, and were evidently erected later than the other protecting forts in the same district, probably as the mining districts extended beyond their first known limits. Mr. Bent believed these to have been of later date than the first Zimbabwes, and cites several ruins in illustration. He further refers to ruins where the circular system of construction has been abandoned.

12. *Fourth or decadent period.*—Small circular stone buildings, smaller inclosures often made of blocks taken from the more ancient walls, but altogether a poor imitation of the workmanship shown in the earlier periods. The cement is also of a very much coarser quality. These buildings have been very frequently erected on the cemented floors laid over the filled-in inclosures of first and second period ruins, which filling-in process is believed to have been the work of the third or fourth period, probably that of the bastard races left in the country on the departure or wiping-out of the ancients; or of local races upon whom the impressions of the ancient methods of building still remained. There are circular stone huts in the Marico district in the Transvaal Colony; the Basutos (see Chapter x.) are known to be skilled in stone building. Messrs. Bent and Selous state that at one time the Makalangas built circular huts of stone blocks. There are Makalanga stone buildings at Chipunza's kraal, also in Mangwendi's country, and at Umtasa's town, while many are seen on the filled-in floors of ancient ruins. The buildings at Umtasa's town are comparatively modern.

13. *Location.*—Practically all the Zimbabwes of major importance are built upon the granite formation, while only a very few are on the diorite and gold-belt formations. The major or capital town ruins are built some miles distant from any gold-reef, while the minor and protecting forts are built near or upon the gold-belt formation. Road-protecting forts are always situated on the summits of kopjes overlooking drifts and guarding neks or passes in the hills or poorts on the rivers, or occupying other strategic positions.* The first Zimbabwe period ruins usually occupy low knolls of granite in valleys, while the second-period ruins of the terraced plan of building most usually crown the heights of kopjes, and are most frequently built upon areas largely artificial, the natural areas being extended by retaining walls and the building up of crevices between the boulders, thus making irregular areas regular. It may be interesting to note that Professor Rawlinson (in *Phœnicia*) states that the Phœnicians frequently built up on all sides from the irregular surface of the natural rock, so as to form a nearly level space.

14. *Building materials.*—All Zimbabwes are built of granite blocks save a very few on the diorite formation, which are built of diorite blocks, and some though built on diorite are constructed of granite which must have been brought from long distances, there being none in those districts. In some few instances courses of diorite blocks, white quartz, and ribbon slate and ironstone have been introduced in the granite walls, perhaps for decorative purposes, while at Bala-bala Ruins a course of quartz has been introduced all round the building. At No. 1 Ruin, Khami, diorite blocks are introduced apparently for the same purpose, and in the temple at Zimbabwe the walls near the tower have

* See M'Tendele chain of five forts; Garamaputzi chain of seven forts; Umzingwani chain of seven forts; Umtelekwe (Sabi) chain of forts; and Lower Sabi chain of forts, Chapter xxiv.

a decoration of black stones alternating with the granite blocks. Ironstone slate is introduced at M'Popoti Ruins and granite and diorite at the Wheel of Fortune Ruins. These instances could be multiplied. The fronts of all the blocks are uniformly squared, but the inner ends are often uneven. The size of the face of these blocks is usually about eight inches by four and a half inches, but much larger blocks are used in the lower courses of the foundations, and these usually protrude on both sides of the walls. No mortar is used in any of the buildings. The stones most frequently show no signs of edged tools having been used to face them, though in some cases marks still remain, and the marks of edged tools can be seen on the diorite blocks. The ancients evidently broke the granite from the outer layers or scales of the whale-back boulders, which layers split naturally, on becoming decomposed, into fairly square form, and these were subsequently trimmed, the splinters in some instances being still noticeable. Some of these blocks have a slight concave on their lower side as if taken from the scales of whale-back boulders. Granite, at some ruins, has also been quarried for in the usual way, and the quarries from which such stones were taken are still to be seen. In some few instances the ancients were compelled to use stone of an inferior quality, there being none other in the district.

15. *Workmanship.*—The buildings show the most elaborate care in their construction, and especially ruins of the first period. The planes of the walls are even and smooth; the courses are regular, each stone closely fitting into the next, while one stone always overlaps the joint between the two stones below it, and the courses in first-period buildings are bonded from front to back. The batter-back of the first period on both sides of the wall, also the rounded ends of walls and of buttresses and conical towers, are always very exactly and neatly executed. In carrying a wall over a boulder

the joints are cleverly made. False courses only appear in ruins of the second, third, and fourth periods.

16. *Cement.*—The ancient cement was made of the finest granite powder, the manufacture of which deteriorated during each successive period. This was used in covering the stones of stairways, flooring the raised platforms, the courtyards, inclosures, and spaces between the different dwellings, and for flooring caves; and in later periods was used for the internal and external linings of the buildings, when it was built up inside the stone walls to the width of sometimes a foot. In the earlier Zimbabwe periods the cement was beautifully smoothed and glazed and subjected to heat, while in the later periods it was left not only unpolished, but also with a rough surface. The cement floors of later periods are very much thinner than those of the early occupants, and do not appear to have been subjected to heat. The difference between the two floorings is very patent.

17. *Tools.*—The ancients were fully acquainted with the uses of iron, and both in Rhodesia and in other countries of the same times, iron tools were used, though iron may not have been in very general use. The sculptures of the ancient ruins of Assyria, Chaldæa, Arabia, and Egypt, and the tables of stone found in Assyria, on which are the celebrated records verifying the history given in parts of the Old Testament, show that the ancients employed edged tools. In Genesis iv. 22 it is stated that Tubal Cain was "instructor of every artificer in brass and iron." Ezekiel xxvii. shows that iron was supplied to the Phœnicians by Babylonia and Assyria. Ancient tools have been found in the ruins of Nineveh. Iron was known in the earliest days of Rome, while it must have been known in India before that period. Iron is said to have been discovered by the ancient Greeks at Mount Ida, 1406 B.C., but most probably it was known in Asiatic countries

long before that date. The marks of edged tools, though not often seen on the granite blocks in the Rhodesian ruins, can still be seen distinctly on the diorite blocks. The sacred birds and the Phallic designs found at Zimbabwe and elsewhere could not well have been sculptured with flint tools. The most ancient gold crucible found in Rhodesia shows the impressions on the flux of the metal pincers which lifted it out of the furnace. But we have also indubitable evidence that the ancients in Rhodesia worked most extensively for iron, especially in the districts of Naka Mountain Pass, Lundi Valley, Bochwa Range, and Muesa Mountains, where is a chain of ancient iron-workings extending in an unbroken line for at least twenty miles, and which district is known to have carried an immense population of ancients. Mundie and the surrounding ruins in this district evidently were the Birmingham, Walsall, and Wednesbury of the ancients in Rhodesia, supplying iron tools for the gold-workings in all parts of the country now known as Southern Rhodesia.*

Iron chisels or wedges, hammers, and trowel-shaped instruments have been found at great depths in ancient workings, and also on some few of the original floors of the builders of the ruins. The iron tools used by the Portuguese are altogether different from those used by the ancients.

There is evidence that at one time iron was of a high standard value. Iron ornaments banded at intervals with gold, and spear-heads once thickly plated with gold, have been discovered.

The ancients also used stone hammers, especially in the reduction of the quartz.† These, which varied from ½ lb. to 50 lbs. in weight, can be found by scores near many of the

* "The Phœnicians, so far as we know them, were well acquainted with the use of iron; in Homer we find the warriors already armed with iron weapons, and the tools used in preparing the materials for Solomon's Temple were of this metal. . . . Even after the introduction of iron tools stone tools were still used for various purposes. . . . 'Chisel' is but the German word for flint."—Sir John Lubbock.

† See Appendix, Note A.

old workings, and also at depths where they discontinued work. Stone axes and stone wedges have been discovered. Flint tools have also been found at Khami and near Old Tati.

18. *Approaches and entrances.*—In locating the positions for the entrances into many of the ruins the ancients appear to have taken into consideration the protection of the entrance provided by the natural features of the ground and the presence of huge boulders, which could be utilised for screening the approach or for making it most dangerous for the invader. At Tuli and Bochwa parallel walls run opposite the main entrances at a few yards' distance, as if to provide a screen or shelter. These are quite detached from the main building. In some instances, especially on high kopjes with precipitous sides, the ancients located the entrance to suit the most accessible point in the ascent of the kopje, as at Zimbabwe Acropolis, Thabas Imamba, Mundie (No. 1 Ruin), M'Telegwa, Umnukwana, Hill of Shields, Wainzi, and Ingangase Ruins, etc., where the approaches for some distance lie between huge boulders, through which the paths zigzag.

Possibly the entrances of many ruins were fixed in accordance with some principles of orientation and occidentation, but entrances are fixed facing all points of the compass, but mainly facing points extending from the north-east round the north to the north-west. Mr. Bent avers that most entrances are built on the north side of the ruins. In many cases this is so. But he could only speak of less than twenty ruins, and some of these of minor importance and without temple remains. Still, it is known that the ancients were better acquainted with the stars of the northern hemisphere than with those of the southern hemisphere.

If the entrances were not fixed for some purpose of astronomical observation, their general northerly aspect

may have been located in order to avoid the prevailing south-east winds, especially as the majority of the ruins are built on exposed positions.

Most of the nauraghes in Sardinia have their entrances on the south-east. Possibly this was due to the local desire of avoiding prevailing winds blowing directly into the interiors. The second period of Zimbabwe architecture of rising tiers of terraces is believed to have been largely founded on the principle of architecture of the Sardinian buildings, but at present it would be rash to assert how far second-period ruins in this country follow the same principle in locating entrances.

The construction of entrances varies considerably. All main entrances of any of the Zimbabwe periods are open to the full height of the present walls and have had no lintels or roofs whatever. The only exceptions are at Umnukwana and M'Tendele (wrongly called by Mr. Bent, Matindela). At Umnukwana the main entrance passes through a wall thirteen feet wide, and is covered by stone lintels, across which the main front wall is carried. At M'Tendele is a walled-up entrance, across which the wall, with a row of herring-bone pattern, had been carried. The entrances at M'Tendele were once wide, but have been narrowed at a later period by square masses of masonry built at both sides of each entrance. At Zimbabwe, in No. 1 Ruin, the height of the entrance walls is thirty feet on either side, and this is also open to the tops of the walls.

In the first-period ruins the entrance walls are all rounded and battered back to the usual one in six feet batter of the earliest Zimbabwes, and most of the entrances of this period have also rounded buttresses. In the second-period ruins the main entrances have square-ended walls comparatively plumb, and, so far as discoveries show, these have no buttresses.

The width of the entrances varies considerably from

eighteen inches to three feet six inches, and in the early periods many have been constructed in such a manner that one or two defenders could keep back scores of invaders, while the buttresses inside the entrance passages would enable a good defence to be made after the outer entrance had been forced. At Mundie Ruins the outside of the entrance is three feet six inches wide, but at the inside of the entrance, which passes through a wall ten feet wide, it opens out to a width of twelve feet.

Holes in doorways and passages of entrance, in the side walls, only so far seen at Zimbabwe, Lotsani-Limpopo Ruins, and alluded to by Mr. Bent as being purposely made by the original builders, are now considered to have been made at a comparatively recent date. The recesses in the entrance walls as if intended for portcullis are, of course, as old as the walls themselves.

The second-period entrances most usually have stone steps cemented over, and these steps rise to the height of the tops of the terrace, and in later periods the steps led up to the floors laid over the filled-in inclosures.

19. *Inclosures and courtyards.*—Every ruin, not that of a road or gold district protecting fort, is divided by walls into inclosures, and in addition to the inclosures there is in almost every case a large courtyard also paved with cement. The internal walls are substantially built, and at one time were level with the main outside walls, and these walls are not built into the main walls, but are built up against them. The larger ruins generally have from six to ten inclosures,* to reach which labyrinthine passages paved with blocks must be traversed. In the Acropolis at Zimbabwe there are covered-in passages, while at Umtelekwe a narrow passage, like that at Zimbabwe temple, runs from end to end of the building. It is only on the original floors of these

* The ruins of Umtelekwe (Sabi) have as many as nineteen inclosures.

ROUNDED ENTRANCE AT LOTSANI-LIMPOPO RUINS

SECTION OF WALL SHEWING CHECK AND SLOPING BLOCK PATTERNS, LUNDI RUINS

inclosures that gold-smelting furnaces and the valuable gold ornaments are to be found. Very many of these inclosures were filled in during one of the two last periods with stones taken off the tops of their walls, until the insides were raised to the reduced levels of the walls. In ruins where there has been no reoccupation the original floors are the present floors. Under many ancient floors was a layer of ashes, generally averaging six inches in depth. This in all probability was a protection against white ants.

20. *Cones, conical buttresses, and platforms.*—These are believed to have been used in the astral worship of the ancients.* At some of the larger ruins we find conically shaped towers, pillars or buttresses of solid masonry, which have wide bases and narrow tops with cemented platforms, the summits being approached by a flight of steps. The platforms always command a good view of the rest of the ruins.

At Umnukwana the base of the conical buttress, which is on the west side of the building but faces the east, is ten feet in diameter and four feet at the summit, and is approached by steps.

At Lundi the conical buttress faces north-east, at Little

* In the Phœnician temples of Syria the altars were always near the conical towers or "high places," in a large court of circular character "open to the heavens."

Speaking at the Royal Geographical Society meeting, Mr. Swan stated: "When these people first arrived at Zimbabwe, they found that it was necessary to have some means of determining the seasons of the year, and they would almost immediately discover, if they had not brought the knowledge with them from their parent country, that the sun rose and set on different points of the horizon at different periods of the year, and that it rose at the same point at the same period of each year. Naturally they would then fix the extreme points of the sun's journey on the horizon, the southern and northern solstices, and then they would learn to subdivide the distance between these two points, and so would have their calendar.

"These temples are of special interest, as they supply us with the only known instance of orientation in the southern hemisphere, where the conditions of solstitial orientation are the reverse of what they are in the northern hemisphere."

M'Telegwa it faces south-west, and at Ingangase it faces west.

At Chum Ruins the base of the conical buttress, which is on the south-west side and faces the south-west, is eight feet in diameter and four feet on the summit, and is approached by steps.

At Umtelekwe (Sabi) there are two rounded buttresses with granite steps leading to the summits.

The rounded buttress in No. 2 Ruin at Khami, which commands a view of the whole length of the gully-approach, may have been a look-out. At any rate, its purpose is doubtful.

Sir John Willoughby, in *Further Excavations at Zimbabwe*, describes a curious conglomeration of buttresses on the south side of No. 1 Ruin at Zimbabwe, which leads up to, and apparently culminates in, the highest point of the outside wall, which commands a view of the interior of the temple. The buttresses, Sir John says, are carefully built on the outside, but their interiors are simply filled in with a mass of stones piled one upon the other.

The high platform at Thabas Imamba Ruins, which is approached by a flight of twelve steps, is believed to be the summit of a conical tower, but owing to the ruins having been filled in, it is at present impossible to make an examination.

Descriptions of the cones at Zimbabwe and elsewhere are included in the description of each ruin.

Each ruin of the first Zimbabwe period so far discovered, and which is situated on a kopje or on a precipitous bluff, has a natural platform on the summit of the rock protected on the outside by the precipice only. These are believed to have been sacred inclosures used for the purposes of Phallic worship, and would have held a large number of worshippers.

21. *Cellars.*—These cellars as seen only, so far, in Matabeleland at the Mudnezero, N'Natali, and Regina Ruins, appear to have been the work of the period, probably the third or fourth, when the filling in of the inclosures was commonly practised. These are built of the usual granite blocks, without mortar, and in the usual Zimbabwe fashion, have cemented floors, and are domed or arched over with stonework, and have a small aperture left in the centre of the top. These cellars vary considerably in size. The three cellars at Mudnezero Ruins are nine feet in depth and six feet in diameter. The cellar at N'Natali is six feet in depth and four feet in diameter, while the cellars, if they are cellars, at the Regina Ruins, though more numerous, are very much smaller. It has been suggested that those at Regina Ruins were merely large drains for carrying the rain-water from the upper terrace past the lower terraces and so out of the building.

These cellars, being built on the lower and original floors, are believed to have been erected immediately before the inclosures in which they stand were filled in. The apertures of these cellars were covered by large stones, and the cement floor, up to which they almost reached, was laid completely over them. There was no "find" in any of these cellars. Treasure chambers were concealed under the floors of the Phœnician temples (Rawlinson).

The so-called "slave pits" in the Inyanga district are of an entirely different plan and construction to the cellars found in these ruins.

Caves in rocks inclosed within the main walls were floored with cement and probably were used as cellars for storing grain.

22. *Drains.*—Both at Zimbabwe and at Mundie a drain runs through the main outer wall on the north-east side of the ruins. In no other ruins so far discovered have similar

drains been found. These are flush with the cemented flooring and incline outwards and slightly downwards. Sir John Willoughby discovered a small drain in No. 1 Ruin, Zimbabwe, underneath one of the inner passages, with an outlet in the centre of the step running across the passage. There is only a very slight fall in the cemented floors of all ruins, and it is possible that these drains carried off the tropical rains falling within the inclosures of the ruins, as these inclosures and courtyards, as explained later, were not roofed in. In No. 1 Ruin, Zimbabwe, the floor inclines slightly to the north-east to where the drain passes through the wall.

These drains, it will be noticed, are only in first-period buildings, where the main walls are from ten feet to sixteen feet in width, and through which the rain-water might have some little difficulty in passing, notwithstanding their being built of dry masonry. In walls built during the second Zimbabwe period, which usually do not exceed three to four feet in width, the water would percolate from the floors through the dry masonry almost as quickly as it fell in the showers.

All the interior buildings on the cemented floors have a raised edge, generally from about three inches to sixteen inches wide, of the floor inclosing the bottom portion of their outside walls and reaching up to about one foot in height. The top edge is rounded off on the outside. This raised edging would prevent the rain-water percolating into the buildings.

23. *Incomplete buildings.*—In several parts of Rhodesia there are foundations only of true Zimbabwe buildings. These foundations have no débris of granite blocks around them, and the upper portions of the foundations are clean and level, offering strong presumptive evidence that they were incompleted buildings.

24. *Buildings never roofed.*—In not one of over two hundred ruins in Rhodesia which have been examined are there any evidences that the buildings or even the inclosures were ever roofed. Nor do those ruins whose walls, owing to non-reoccupation, still stand somewhat near their original heights show any signs of their having been roofed in. Indeed, the extent of some of the inclosures and their most irregular shapes entirely preclude all probability of roofing being erected. Every archæologist who has inspected the ruins in Rhodesia has arrived at the same conclusion. Certainly the temples in which Phallic worship was conducted were without roofs, for, in the old historic words of writers on this subject, these were all "open to the light of heaven."

There appears to be an agreement of opinion that these buildings, like those in Syria, Arabia, Sardinia, and Mediterranean countries, were primarily strongholds, places of asylum in case of attacks, towers of observation, temples, treasure stores, food depositories in the event of siege, and arsenals of arms. In many of the first-period ruins in Rhodesia gold-smelting and the manufacture of gold ornaments were also carried on very extensively.

The vast majority of the large populations which are known to have lived near each important ruin could not possibly have been housed in these buildings, especially as certain inclosures would be set aside for some of the above purposes. Probably only the consul or overlord for each district comprised in the sovereign undertaking (for mining in the ancient days, as we have shown in the chapter on "Ancient Gold-mining," was not an individual enterprise, but that of the State) and some of his chief taskmasters and stewards, and the priests and their attendants, with their families, occupied such of the inclosures as were not required for the purposes specified. These occupiers are believed by archæologists and antiquarians to have lived in lighter buildings erected, of course with roofs, within the various inclosures, one inclosure

being reserved for each family, while the general population lived in dwellings of the same type grouped round the main ruin, evidently covering, at least in some instances, very large areas of countryside.*

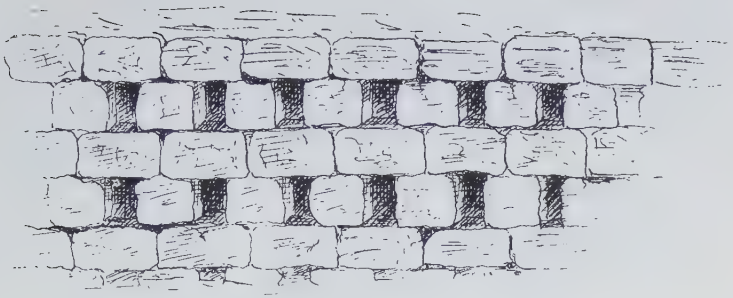
25. *Ornamentation.*—In the Rhodesian Zimbabwes there are five principal patterns of decoration introduced into the walls of the buildings, these being known as Dentelle, Chevron, Herring-bone, Sloping-block, and Check.

Dentelle.—This pattern is formed by placing blocks of stone of one or two rows edgeways or cornerwise to flush with the wall, resembling chevron pattern laid flat. This is a rare pattern, and so far has only been found at M'Tendele and Zimbabwe, at which latter place it is present near the summit of the conical tower, where, writes Mr. Swan, it faces the setting sun at the winter solstice. This pattern is also found in the steep passage-way of the Acropolis. At M'Tendele this pattern is in two rows facing W.N.W.

Chevron.—This decorative pattern is formed with tile-like stones placed chevronwise, making a double row of triangles with apices up and down alternately, the spaces between being sometimes neatly filled in with smaller stones. Mr. Bent supposes this pattern to be symbolical of fertility, and states that it resembles the Egyptian heiroglyphic symbol for water, and that it is similar to the symbol for the zodiacal sign of Aquarius. On Phœnician coins representing a ship the sea is shown by chevron pattern. This pattern has only been found in three ruins, namely,

* Sir John Willoughby writes: "Among the many problems suggested by the excavation of these ruins is that of how the inhabitants sheltered themselves. So far no trace of roofing has been discovered, and indeed, as before said, I think the size of the inclosures precludes the possibility of their having been roofed, added to which the majority form only three sides of a quadrangle. Possibly the inhabitants built their huts or houses within these inclosures, one or more being occupied by each family. It is unreasonable to suppose that they lived within the open walls without shelter and exposed to the tropical downpours of the rainy season."

"The nûraghe was but the nucleus of a large township."—PERROT and CHIPIEZ.



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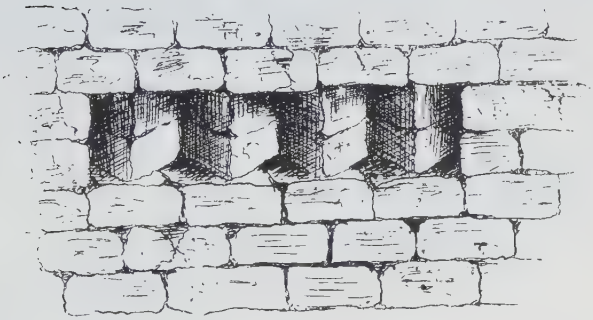
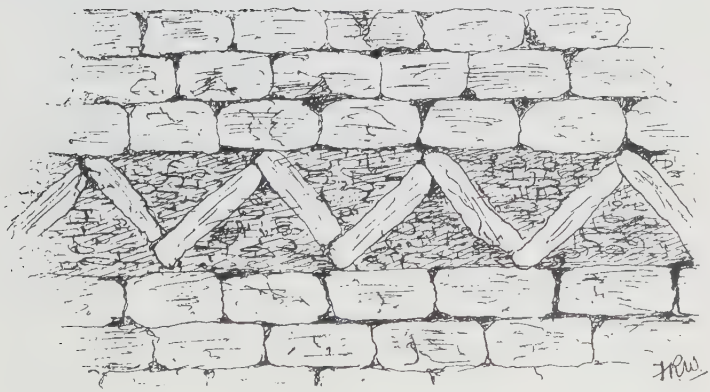


DENTELLE PATTERN



CHEVRON PATTERN

DECORATIVE PATTERNS

Umnukwana, Dhlo-dhlo, and the elliptical temple at Zimbabwe. Chevron pattern is found on the cartouches of the kings of the earliest Egyptian dynasties (Brugsch) and also on Punic stelæ (Rawlinson).

At Umnukwana it is found in No. 2 inclosure, and it extends the whole length of the south inside wall, and also for seven feet along the west inside wall, and is about twelve feet above the original floor of the ancients.

At Zimbabwe this pattern extends for about one hundred and twenty feet on the outer side of the main wall of the temple, facing the south, south-east, and east, and is in two tiers, being a few courses from the summit of the wall.

Herring-bone.—This pattern is far more generally used, and is made of double rows of stones, hewn into a kind of tile and placed obliquely one row at right angles to the other. This pattern is most usually made of granite, but at M'Popoti it is made of ironstone slate, and at Impanka and Mudnezero of ribbon slate. At Little Umnukwana Ruins the tiles of which this pattern is made are of an unusually large size, being about twelve inches in length. An old engraving in Herr Mohr's work shows herring-bone pattern on the inside of Tati Ruins. At Lundi and Lower Lundi ruins the herring-bone patterns are very low down on the walls.

Sloping-block.—Single rows of sloping blocks, resembling the lower course of herring-bone pattern and inclining to either direction, are to be found in several ruins. These rows are generally made with small tile-like blocks.

Check.—This appears to be the most common ornamentation. It is formed by rows of gaps of two inches between the blocks, and resembles the squares on a chessboard. The Check Ruins in the M'Pateni district of Belingwe are peculiar in that their walls, both inside and outside, are profusely covered with check patterns.* Check is the prevailing pattern in second-period Zimbabwes.

* "Repetition with the ancients was supposed to increase the power of the symbol."—PERROT and CHIPIEZ.

26. *Position of ornamentation.*—Archæologists and antiquarians place great importance on the exact position of the various patterns in ascertaining the orientation and occidentation of the Rhodesian Zimbabwes. Whether the ancients adopted, as it is believed they did, any method in fixing the points of these decorative patterns, is a question for scientists to settle, but as a basis for the further investigation of this question we detail the positions of ornamentation of some few of the ruins. So far as check pattern is concerned we must admit that this decoration has been ascertained to face all points of the compass. In this list the patterns will be mentioned as follows:—

Dentelle, D; Chevron, C; Herring-bone, H; Check, Ck.

Ruins.	Patterns.	Facing.
Umnukwana	C.	N. to E.
Little Umnukwana	H.	E.
Ruins (M'Pateni)	H.	E.
„ „	H.	W.
Ruins (M'Pateni)	Ck.	N.W.
Mundie (No. 3 Ruin)	Ck.	N.E.
Nuanetsi	Ck.	N.E.
Bochwa	Ck.	N.E.
Escepwe	Ck.	S.W.
Ruins (near Essengwe)	H.	E.
M'Popoti	Ck. and H.	W.
Wedza (Baden-Powell)	Ck. and H.	—
M'Wele	H.	N.W. and S.E.
M'Wele tributary	Ck.	S.
Ingangase	H.	W.
N'Natali	Ck.	W.
Impanka	H.	W.
Mudnezero	H.	N.W.
Lumeni	Ck. and H.	N.E. and W.
Golulu	Ck. and H.	W.
Meewe	Ck.	N.E.
„	H.	S.W.

CHEVRON PATTERN ON WALL OF ELLIPTICAL TEMPLE, ZIMBABWE

HERRING-BONE PATTERN FORMED OF LARGE TILE-LIKE STONES, LITTLE UMNUKWANA RUINS

Ruins.	Patterns.	Facing.
M'Telegwa . .	H. .	S.
Sebakwe-Umnyati	Ck. .	N.E.
Umtelekwe . .	H. .	N.W.
Tati . . .	H. .	—
Impakwe . .	H. .	—
Zimbabwe (temple)	C. .	S.S.E. and E.
„ „	D. .	W.N.W.
„ (tower)	D. .	W.
„ (Acropolis)	D. and H.	—
Lundi . . .	Ck. and H.	E.
Lower Lundi .	H. .	S.E.
M'Tendele . .	D. .	W.N.W.
„ . . .	H. .	W. and E.
Umtelekwe (Sabi)	H. .	—
Khami (No. 1, Plateau A)	Ck. .	W.
„ („ 1 „ C)	Ck. .	S.E. and N.
„ („ 1 „ C)	H. .	S.W. (2) and N.W.
„ („ 3) .	Ck. and H.	S.E.
„ („ 5) .	Ck. .	W.
„ („ 6) .	H. .	W. to N.W.
„ („ 7) .	Ck. .	E.
„ („ 8) .	Ck. .	W.
„ („ 8) .	Ck. and H.	N.N.W.
„ („ 9) .	Ck. .	W.
„ („ 10) .	Ck. .	S.W. and W.
Ihurzi Ruins .	H. .	S.W. to N.W.
Dhlo-dhlo . .	Ck. and H.	N.E.
„ . . .	Ck. and H.	N.
„ . . .	H. .	S.W.
„ . . .	H. .	S.
„ . . .	Ck. and H.	W.S.W.

A small portion of chevron is found at Dhlo-dhlo.

In the oldest or first-period Zimbabwes the patterns appear to have been placed for purposes connected with the observation of the sun and are not so profuse, the patterns employed being chevron, dentelle, and herring-bone,

the two former occupying an elevated position on the faces of the walls.

At Zimbabwe the two rows of chevron pattern run round a fourth part of the circumference of the wall of the elliptical temple. Professor Müller, the great Arabian archæologist, in pointing out several very striking resemblances between the temple of Marib, the ancient Saba of South Arabia, and the temple at Zimbabwe, says that at Marib "the inscription is in two rows, and runs round a fourth part of the circumference." He also shows that the principle of orientation at Zimbabwe is identical with that employed in the temple at Marib.

In the terraced or second-period Zimbabwes ornamentations of check pattern are to be found on almost all the faces of the outside walls, while they are directed to every point of the compass. Mr. Bent has suggested that the builders of the later Zimbabwe practised solar worship under another form to that practised by the builders of the earliest Zimbabwes (*vide* "Periods," *ante*). The pattern decidedly peculiar to this period building is that of check, and it can be found anywhere on the walls between the foundations and the summits. So profusely is this pattern employed during the second period that we find it introduced in the smallest of the many retaining walls of this period. Dhlo-dhlo, which represents, except the temple portion, mainly the features of the second-period architecture, Dr. Schlichter considers the most interesting ruin, from an astronomical point of view, south of the Equator.

In the ruins of what is spoken of as the decadent period, in which the buildings are obviously of very inferior workmanship, no decorative pattern has yet been discovered.

27. *Absence of ornamentation.*—In more than two-thirds of the ruins of Rhodesia no ornamentation can be found notwithstanding that these are of the class of ruins in which

ornamentation might have been expected. All the other usual evidences of orientation and occidentation are present in the elliptical plan, position of entrances, etc., and in all probability the patterns once existed. Owing to the patterns of the first-period buildings, especially chevron and dentelle, being so far only found in an elevated position, they have disappeared with the dilapidations of the upper portions of the walls, and in cases where first-period ruins have been filled in the patterns on the inside walls have become buried.

Herring-bone pattern is very apt to disappear when once the row of blocks immediately above it has been removed. For instance, at No. 3 Ruin at Khami the lower portion of a herring-bone pattern, which is believed to have once extended for a considerable length round the face of this building, is now only represented by a few small slabs, and these are becoming less in number every few months.

28. *Other decorations.*—At some ruins of the first and second periods the ancients have decorated portions of the walls by introducing blocks of other stone than that with which the buildings are erected. These create a contrast, the foreign stone being most frequently laid in methodical pattern. For example, in the temple at Zimbabwe, on two walls near the conical tower, there is a decoration of black stones alternating with the granite blocks; at Dhlo-dhlo are two parallel lines of dark ironstone introduced on the north side; at Bala-bala a course of white quartz blocks runs round the wall, and at Khami and other ruins diorite blocks are introduced into the wall among the granite blocks, evidencing the intention of the ancients to decorate the walls. These instances could easily be multiplied.

[For notes on the construction of ancient ruins in Inyanga and Mount Fura districts see Chapter xxv.]

CHAPTER XIII

THE GREAT ZIMBABWE

Derivation—Early References—Explorers—Situation—Period—Importance — Extent — Ornamentation — General Description — Cones, Towers, and Buttresses—Notes.

Derivation of name.

ON the question of the derivation of the name "Zimbabwe" there are many and utterly diverse opinions, to no one of which can we, at present, commit ourselves, though the one suggested by Mr. Bent would appear to be the most probable.

(1) Mr. Bent suggests that it is of Abantu origin, and came from the north, where, he says, it is generally used to denote the head kraal of any chief. *Zi*, he argues, is the Abantu root for a village, *umzi* being in Zulu the term for a collection of kraals. *Zimbab* would signify somewhat the same, or rather "the great kraal," and *we* is the terminal denoting an exclamation, so that Zimbabwe would mean, "Here is the great kraal." Some authorities state that the word "Zimbabwe" is used north of the Zambesi to describe the head kraal.

(2) Other writers suggest a connection with one of the places called in the Scriptures "Saba," of which there were three, two in South Arabia and a third not located. The River Saba or Sabi (Sabia in old Portuguese records) flows seventy miles to the west of Zimbabwe, and on the whole of its watersheds and valleys ancient ruins of the earlier type are exceedingly numerous. It is contended that the name

Saba or Sabæ was given to it on account of the alleged occupation of this country by the Sabæans, the people of South Arabia, whose capital was Saba, which is now called Marib. The oldest Arab records speak of the country of Saba as lying inland to the west of Sofala.

(3) At least one writer connects the name with the Zimbas, Owazimba, Mouzimbas or Cazembe mentioned by Diego de Couto, a people who occupied country north of Tete, on the Zambesi, and who were not vassals to the kingdom of Monomotapa. These have been described as the Goths, Huns, and Vandals of South-East Africa. They devastated three hundred leagues on the coast and entered Monomotapa, where, old records say, "they entrenched themselves." A French map of 1705 shows the country of "Les Zim Muzimba, Peuples Anthrophages" as considerably north of the Zambesi above Tete, and within it is marked "Forteresse Zimbas." These people are supposed to be the Abolosi who piled up the ramparts of unhewn stones on the kopjes of Southern Rhodesia, which are known as Abolosi forts.

(4) Mr. Selous believes Zimbabwe (pronounced in some parts of the country Zim-bād-gi, in others Zim-bāb-wĭ) to be derived from the words "umba" or "imba," a building, plural "Zimba," and "mābgi," stones, those words being used at the present day in Mashonaland. Thus, he states, Zimbabwe means "buildings of stones."

The Rev. G. Cullen Reed, L.M.S. Station, Bulalema, suggests, "So far I have not got one of the old men to say there was a definite meaning to the term 'Zimbabwe,' save as to the name of the old capital of Mamba. It may, however, be derived from the words *ndzimu* and *ibgwe*, and mean a 'spirit of the rock.'"

Earliest references.

De Barros (1552) mentions "the great Zimbaoe, or King's Place," or rather the ruins of it.

Duarte Barbosa (1514): "In the interior (from Sofala) fifteen or twenty days' journey, is a great population named Zimbaohe." . . . "Among such people is very often the King of Benemotapa." (Benemotapa and Monomotapa are terms used indiscriminately.)

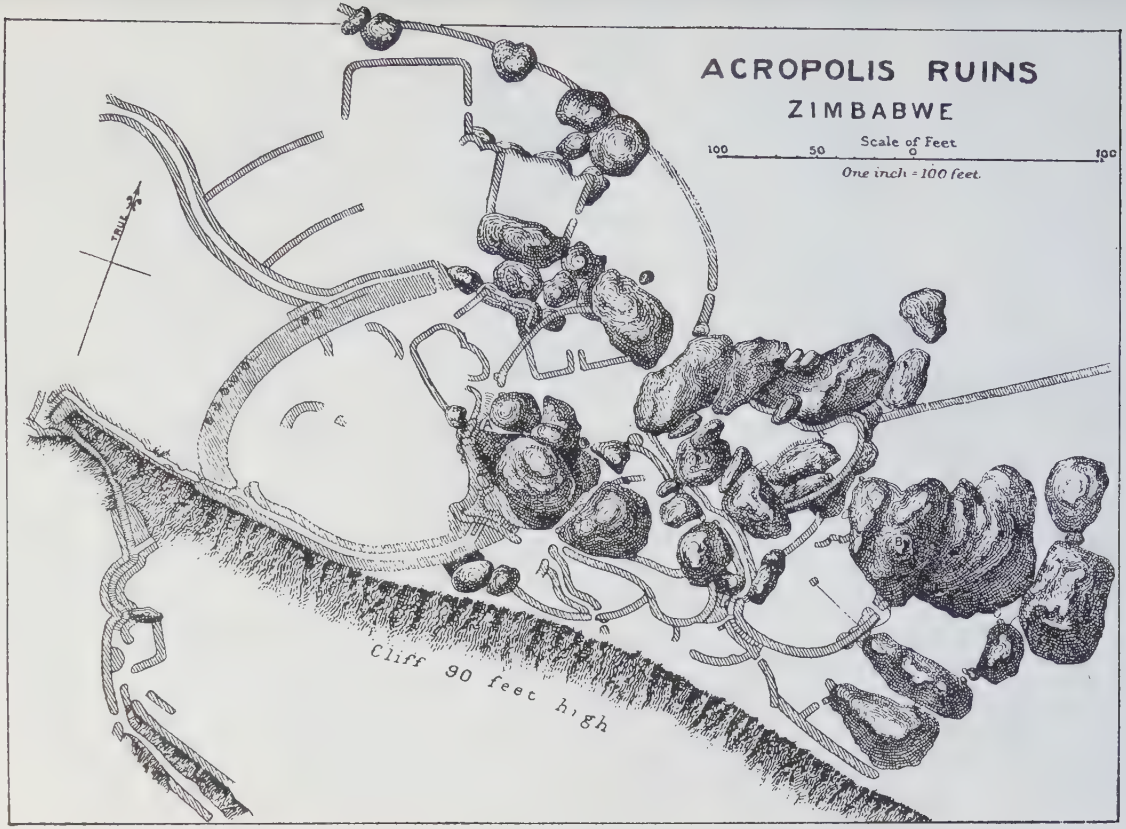
Livio Sanuto (1588) writes: "In the midst of the ancient mines (of Monomotapa) that are known, Zimbaoe stands. The word 'Zimbaoe' signifies 'court,' and any place where the Benemotapa (king) goes is called so. Ptolemy calls the place Agesymba."

Jesuit records (1560–1750), in referring to "Zimbaoe" in Monomotapa, state that Father Gonsalvo Silveira, of the Society of Jesus, "entered Zimbaoe, where he was hospitably received by the emperor (king)," that "he presented the king with a silver statue of the Blessed Mary," and describe how later he baptised the king and his head-men at Zimbaoe, and so raised the ire of the Arabs at Zimbaoe, who endeavoured to poison the king's mind against Silveira and Christianity. The king was young, and his mother became influenced by the Arabs.* "On the Fourth Sunday in Lent, 1561," Father Silveira, the proto-martyr of Monomotapa, was murdered by Arab merchants, as the letters suggest, at some settlement near the Mosengesses River, a tributary of the Zambesi.

The Portuguese column sent "(1) to make the gospel known, (2) to obtain riches from Monomotapa to support the great expenses of Portugal in India, (3) to take vengeance for the murder of Father Silveira," communicated, July 1572, with the Emperor of Monomotapa "at his chief place Zimbaoe, distant 280 leagues from Sena, where the rich mines of Masapa are situated."

Alvarez (translated in 1600) states: "For here in Torva and in divers places of Monomotapa are till this day

* The Arabs were finally driven out of Rhodesia by Umpezene just previously to Mozilikatse's invasion of the country. An Arab embassy to King Lo 'Bengula met with a discouraging reception.


ACROPOLIS RUINS
ZIMBABWE
100 50 0 100
Scale of Feet
One inch = 100 feet.
Cliff 90 feet high

remaining massive, huge, and ancient buildings of timber, lime, and stone, being singular workmanship, the like whereof are not to be found in all the provinces thereabouts. Here is also a mightie wall of five and twenty spans thick which the people ascribe to the workmanship of the divell, being from Sofala, 510 miles the nearest way."

Dapper says: "In this country, far to the inland on a plain . . . stands a famous structure called Simbaae."

These two last accounts were derived by the Portuguese only from Arab sources.

It is impossible to state how far some of the references apply to the Great Zimbabwe, as the Jesuit letters mention several Zimbaoes in different parts of Monomotapa, at which the king visited, and where were Christian missions, there being no less than fourteen missionary provinces in Monomotapa with a large number of churches. However, it is believed that a Christian church existed at the Great Zimbabwe. One Zimbaoe, mentioned as one of the courts of the King of Monomotapa, was north of "Massaqueca" ("Massi Kessi of to-day), probably Masapa.

The French map of 1705 shows "Ville Royale du Monomotapa" at a point which may or may not be that of the Great Zimbabwe.*

All Portuguese accounts agree in stating that the residents of the Zimbaoes or Zimbabwes and the principal portion of the population of Monomotapa were Mocarangas (Makalakas or Makalangas, or Bakalangas).

MM. Monteiro and Gamitto, who in 1831 made a journey through Zambesia and Cazembe, speak of numerous Zimbaoes to the north of the Zambesi, as also does Dr. Living-

* Some portions of the country included in this map are fairly accurately marked off, but the markings of other portions remind one of Swift's lines—

"So geographers in Afric maps
With savage pictures fill their gaps;
And o'er the inhabitable downs
Place elephants instead of towns."

stone at a later date, while Dr. Lacerda (1831) states that King Cazembe's court or Zimbaoe was at the south end of Lake Moero, which is four hundred and fifty miles north of the Zambesi.

Rediscoverer of Zimbabwe.—These ruins were first rediscovered by Mr. Adam Renders, an American, in 1868 (*R.G.S. Journal*, 1891, February, p. 105).

Explorers of Zimbabwe.—In 1871 a German traveller, Karl Mauch, visited Zimbabwe, and investigated these ruins. His description of these ruins is considered careful and accurate, but his speculations as to their origin were altogether discredited by archæologists. He makes reference to a sacrifice which took place among the natives of this locality in his day.

Mr. Thomas Baines, F.R.G.S., the explorer, visited these ruins in the early seventies, and his paintings of the Acropolis ruins, of the elliptical temple, and of the sacred conical tower, the latter showing the native sacrifice of black oxen, are considered to exactly represent the ruins, and several authors of works on South-East African subjects include his paintings of Zimbabwe ruins among their illustrations.

Messrs. Willie and Harry Posselt, who reside on their farms close to Zimbabwe, and who were in this country long before the Chartered Company had acquired their interest in these territories, have frequently examined the ruins, and they discovered the soapstone birds and the cylinder in these ruins which are mentioned in Chapter xi.

Mr. Edward Muller likewise has examined these ruins, and it was he who discovered the wooden bowl with the zodiacal signs, an illustration of which forms the frontispiece in Mr. Bent's work. This bowl was found in a cave on Mount Victoria, close to the Cotopaxi gold-reef, sixteen miles west of Zimbabwe.

In November and December, 1892, Sir John Willoughby

conducted exploration work at Zimbabwe, and in his *Further Excavations at Zimbabye* (published in 1893 by Philip and Son, London), the results of his extensive investigations are ably set forth, and in his book are given, for the first time, detailed plans of the principal ruins in this group.

Mr. W. G. Neal, one of the authors of this work, examined the ruins of Zimbabwe in 1892. Messrs. Neal and Exall were the first to obtain a gold output in the Victoria district, and this was from the Natal reef, which is fourteen miles north-west of Zimbabwe.

Mr. J. Theodore Bent and Mr. H. M. W. Swan visited Mashonaland at the instance of the Royal Geographical Society and the British Association for the Advancement of Science. Their explorations at Zimbabwe occupied only two months—June and July, 1891—and are described in *The Ruined Cities of Mashonaland* (Longmans, Green, and Co., London).*

Dr. Schlichter, a German archæologist, now deceased, also visited Zimbabwe, fixed an approximate time of the erection of the ruins at about 1100 B.C., and described the results of his investigations in *Petermann's Mitteilungen, 1892*, and in the Royal Geographical Society's journals.

Mr. G. Philips visited Zimbabwe, and in an address

* Mr. Bent states that the actual time spent by Mr. Swan and himself in examining the Zimbabwe ruins did not exceed five weeks, as they were delayed by lack of native labour, wet weather, and the necessity for clearing away bush before the examination could be commenced. Sir John Willoughby states: "It is a matter for regret that Mr. Bent, who had great experience in archæological work, was unable to devote more than two short months to his survey of a field so vast and so full of invitation. The solid amount of work required to thoroughly excavate the Temple, with those other most important ruins which occupy the Zimbabye Hill, would alone involve the best labour of many men, and for a period of not less than two years. But in visiting an entirely fresh field for observation, Mr. Bent was confronted with the necessity of making a general and careful surface survey before deciding upon the first point at which any substratum should be exposed. My visit to Zimbabye was made with the sole object of excavating certain spots I had previously examined as thoroughly and rapidly as possible, and without that caution which the expectation of an 'expert's' report demanded."

delivered on the 24th November, 1890, at the Royal Geographical Society's meeting, described these ruins.

Mr. F. C. Selous, the celebrated African hunter, also visited Zimbabwe, and states his opinion as to the ancient builders in *Travel and Adventure in South-East Africa* (published by Rowland Ward and Co., Ltd., London).

Situation: 20° 16′ 30″ south latitude and 31° 10′ 10″ east longitude; 3,600 feet above sea-level. Sir John Willoughby thus describes the locality of Zimbabwe. "Zimbabwe Hill, the principal feature of the landscape, is a rocky eminence of granite, situated on the south side of the valley of the Umshagashi River, which flows south-eastwards a distance of about four miles from it. Its elevation above the surrounding plain is 350 feet, crowned on its southern and western sides by ruins, and on the north side by the extensive native village of Mgabe, named after its dynastic chief. The valley, some fifteen miles long by ten miles broad, is bounded on the west by broken and thickly wooded hills of quartz, iron, sandstone, and slate formation, which intervene between it and the plain surrounding the township of Victoria; on the north by a long range of similar formation, called the Besa Mountains; on the east by a fine-looking group of mountains (the Inyuni Hills); and on the south by low granite hills, forming the fringe of a very broken granite country separating the high plateau of Mashonaland from the low country and the valley of the Limpopo River.

"The principal ruin, forming the large elliptical inclosure which, since its discovery, has been termed the temple, lies half a mile due south of Zimbabwe Hill (the Acropolis), and from the walls and network of ruins one may suppose it was at some time or other inclosed and connected with the hill itself. A small valley ('the Valley of Ruins'), with many clusters of ruins, intervenes between Zimbabwe Hill and the high ground occupied by the temple and numerous ruins of lesser importance.

"There is an excellent and well-worn waggon track through an easy, though hilly country, by which the distance between Victoria and Zimbabwe has been shortened to fifteen miles, and easily covered on horseback within two and a half hours, or by ox-waggon in a short day's journey."

In describing the Zimbabwe Hill, or Acropolis, Mr. Bent remarks: "From the top lovely views can be obtained over the distant Bessa and Inyuni Ranges on the one side, and over the Livouri Range and Providential Pass on the other, whilst to the south the view extends over a sea of rugged kopjes down into the Tokwe Valley. From this point the strategic value of the hill is at once grasped, rising as it does out of a well-watered plain, unassailable from all sides, the most commanding position in all the country round."

Period.—As before stated (Chapter xii.), the architecture and construction of the elliptical temple at Zimbabwe are believed to be of the earliest known Zimbabwe period, which in this work is, for reasons explained before (Chapter xii.), termed the first Zimbabwe period. This is shown by the elliptical plan of building, the enormously wide foundations, the best workmanship on both sides of the walls, and the batter-back both of the inside and outside of the main walls, and by the absence, except in instances of obvious extensions of later date, of any one of the distinguishing features of the styles of architecture and construction of the second or later periods.

With regard to the Acropolis, several writers hold that the architecture of these buildings is of a later date than that of the elliptical temple, but still belonging to a period in which Phallic worship was observed. But though later, it would be rash to assert that its architecture and construction were in any way similar to those of the second period, for the Acropolis has a massiveness, symmetry, width of foundation, and excellent workmanship not seen in the major portions of the buildings of the Dhlo-dhlo, Khami, and other ruins of the second period.

In the "Valley of Ruins" there are buildings of the first period and also of late periods, some showing the most inferior workmanship of the decadent period.

Extent.—The ruins still remaining occupy in a compact form an area of over 945 yards by 840 yards, but beyond this area there are traces of old foundations and débris of stonework so dilapidated that, until more exploration work has been done, it would be difficult to define their plan or to show their connection with the main ruins. This metropolitan centre must have carried an immense population of ancients, and this seems more apparent when the evidences as to the large populations of such smaller ruins as Thabas Imamba and Khami are considered. The Zimbabwe ruins are practically unexplored, and as silted soil has at so many ruins completely hidden the foundation walls, so excavations at Zimbabwe may show that the area occupied by the ruins was once very decidedly more extensive.

Importance.—Zimbabwe, so far as discoveries made to date demonstrate the fact, is the most extensive, massive, and important group of ruins yet known in Rhodesia. They certainly are the chief ruins of the Sabi (Saba or Sabæ) area, and are believed also to have been the ancient metropolis of this country.

(1) Several writers affirm what recent discoveries at these ruins appear to attest, namely, that gold from many mining districts was brought here in dust form, also stored, some being used in the manufacture of gold ornaments and articles known to have been most extensively carried on here, and some taken to the ancient port of Sofala. This is evidenced by the quantity of gold-dust found in the soil on the floors of the road-protecting forts, which are at considerable distances from any gold area. Gold of all qualities and standard values is to be found here, some of which must have come from distant reefs. At Zimbabwe are also found gold ornaments of every shape and design, while in many of

WALL OF ELLIPTICAL TEMPLE SHOWING CHEVRON PATTERN

ROCKS WITHIN RUINS AT ZIMBABWE

WALL CARRIED ACROSS BOULDERS, ZIMBABWE

THREE VIEWS OF ZIMBABWE

the individual ruins throughout the country only one or two of the many styles of gold ornaments are to be found. Gold-smelting operations were carried on by the ancients in No. 3 Ruin and on the Acropolis, and most probably elsewhere at these ruins.

(2) Probably Zimbabwe was the centre for the religious worship of the ancients of the whole of this country, for here are found, in a number undiscovered in any other Rhodesian ruin, temple remains, monoliths, and Phallic emblems, and most undoubted evidences of nature-worship. Evidently the great temple was the St. Paul's, or cathedral, where the great national feasts were held, and where the dates of the seasons and festivals were fixed. Here, too, would be the sacred oracles, to whose decrees both rulers and people would bow. Seeing the ancient nature-worshippers must have been here for many centuries and that the cult of its priestcraft was, as antiquarians affirm, extremely close and reserved, demanding proficiency in the then known arts and sciences, we can imagine that here was the college and its professors of the complicated ritual and deep learning which research has shown to have been the characteristic of the Phallic worship, for the people, who were educated in scientific matters to an extent almost beyond modern conception, would not be ruled over by an uneducated priesthood.

(3) Here would also be the seat of government, the head-quarters of the consul representing the home country, of which this was a colony, whether, as has been suggested, once Sabæan and later Phœnician; the residence of the director of this sovereign industry, for in those ancient days individual enterprise in mining was unknown.

(4) The chief importance of these ruins lies in the fact that from their architecture and construction can be deduced the styles of architecture present in the ruins all over the country.* Archæologists place Zimbabwe in the first period

* See *Periods*, Chapter xii.

of the ancient architecture of this country. So far no building older in type than the elliptical temple at Zimbabwe has yet been discovered, though others may be of anterior date but of the same period of architecture. Possibly some of the first-period ruins which lie between Zimbabwe and the lower valleys of the Sabi might have been erected earlier, as the ancients, it is suggested, are not likely to have built their first fort and temple at least two hundred miles from the coast as the crow flies. Moreover, the large elliptical temple was originally planned as seen to-day, and the plan, together with its massive walls, suggests that the ancients, before the building was erected, had arrived at the conclusion that the mining industry would be permanently payable, and would justify extensive and permanent buildings.

Ornamentation.—In the elliptical temple decorative patterns extend for about one hundred and twenty feet on the outer side of the main wall facing the south, south-east, and east. These consist of two tiers of chevron pattern, and are situated a few courses from the summit of the wall.

In the large conical tower and near its summit is a course of dentelle pattern; a portion of this pattern was destroyed by Karl Mauch in 1871. This pattern, says Mr. Swan, "seems to have been orientated towards the setting sun at the winter solstice."

At the Acropolis a sort of dentelle pattern is inserted in the wall at the angle in the passage-way of the steep approach from the bottom of the precipice. There are six rows of herring-bone pattern in the wall of the small plateau immediately below the summit of the hill. On the outer side of the south-west wall of the Acropolis temple and facing the south-west, is a decorative pattern.

General description.—The Great Zimbabwe comprises several groups of ruins, including—

(1) The temple, or large elliptical ruin, with a round conical tower.

(2) The "Valley of Ruins," lying between the temple and the Acropolis Hill.

(3) The Acropolis, an intricate fortress on a hill half a mile due north of the temple.

(1) THE TEMPLE, OR ELLIPTICAL RUINS.

This ruin is a mazy labyrinth of walls of peculiar and awe-inspiring mystery. The walls are built of well-cut granite sets about the size of an ordinary brick, and are laid in marvellously even courses without mortar, and are still in a remarkably good state of preservation. The circle is elliptical, and resembles the temple of Marib, in Arabia, referred to in Chapter iii. Its greatest length is 280 feet, and its highest wall thirty-five feet above the ground; the greatest base thickness is sixteen feet two inches and its thinnest point five feet. The best building is on the south-eastern side, where the walls are thicker and higher. On the western side and in some of the interior walls the courses are less regular, the stones are of unequal size, suggesting, Mr. Bent says, a different period of workmanship. There are three entrances, one three feet wide, facing the hill fortress and the north. Near this entrance are steps covered with granite cement leading down to the various passages which converge here from the centre of the building. The entrance to the north-west is walled up. It is narrow and straight, and protected by two buttresses on the inside. The third entrance is between the two mentioned. On the south-east wall outside is some ornamentation work of chevron pattern. Large monoliths are fixed on this side of the wall; others have fallen down. The top of the wall is neatly paved with slabs of granite. A long, narrow passage leads direct from the main entrance to the sacred inclosure, so narrow in parts that two people cannot walk abreast, while the walls on each side rise to a height of thirty feet, being built

with great evenness of courses. The approaches to the sacred inclosure are carefully defended with buttresses on either side. There is a raised platform immediately in front of the large round tower, covered with a flooring of thick cement, supported by large stones, into which a monolith has been stuck. This platform was connected with the sacred inclosure by a flight of cement steps, and was presumedly used for religious purposes. The symmetry of the courses in the two round towers is remarkable. The sacred inclosure was floored with cement. The battering of the big tower is carried out with mathematical accuracy. A dentelle pattern is worked in the upper courses. This pattern was partially destroyed by Karl Mauch in 1871. The tower was probably thirty-five feet in height, with a summit level of about four feet in diameter. These towers are proved by Mauch and Bent to be of solid masonry. The rest of the circular building is divided off into smaller inclosures.

(2) "VALLEY OF RUINS."

The valley between the circular ruin and the fortress on the hill is a mass of ruins, and includes at least ten distinct elliptical buildings, also traces of very many others, also a curious angular inclosure divided into several chambers at different levels. This is No. 1 in Sir John Willoughby's book and plan. Mr. Bent only casually mentions this ruin, but the plan in Sir John's book gives measurements and full descriptions. This ruin is situated sixty-three yards north of the large temple, and was formerly connected with it on either side by walls. It has three straight entrances. Two, if not three, round towers once stood in Ruin No. 1, also several monoliths. A narrow passage from this ruin conducts one through a perfect labyrinth of ruins, some of which are of inferior workmanship, and doubtless are of a later period. These circular ruins repeat themselves for about one mile.

CONICAL TOWER, ELLIPTICAL TEMPLE, ZIMBABWE

(3) ACROPOLIS AND TEMPLE.

The hill fortress is of labyrinthine character. The kopje on which it is erected is itself of great natural strength, being about 500 feet high, and having on the south side a precipice of smooth rock of seventy feet to ninety feet. On the only accessible side there is a wall of massive thickness, being thirteen feet thick on the summit with a batter of one foot in six feet, and in height thirty feet in parts, with a flat causeway on the top, decorated on the outer edge by a succession of small round towers three feet in diameter, alternating with tall monoliths. The approach to the fortress is protected at every turn with traverses and ambuscades. A flight of steps leads up from the bottom of the precipice (see description of Khami No. 1 Ruin as to flight of stairs on the face of the precipice), and runs up an exceedingly narrow slit between the boulders. In front of the steps a portion of the wall is built in dentelle pattern. At the summit of the hill are large boulders fifty feet high, with a little plateau approached by narrow passages and steps on either side. The plateau was adorned with huge monoliths and decorated pillars of soapstone, the patterns on which were chiefly of a geometric character, one being eleven feet six inches in height. The large semicircular space below this plateau contained an altar covered with cement. The labyrinthine character of these buildings baffles description. The fortress contains several buildings with ornamental patterns on the walls. A flight of steps led from the temple to the gold-smelting furnaces and caves.

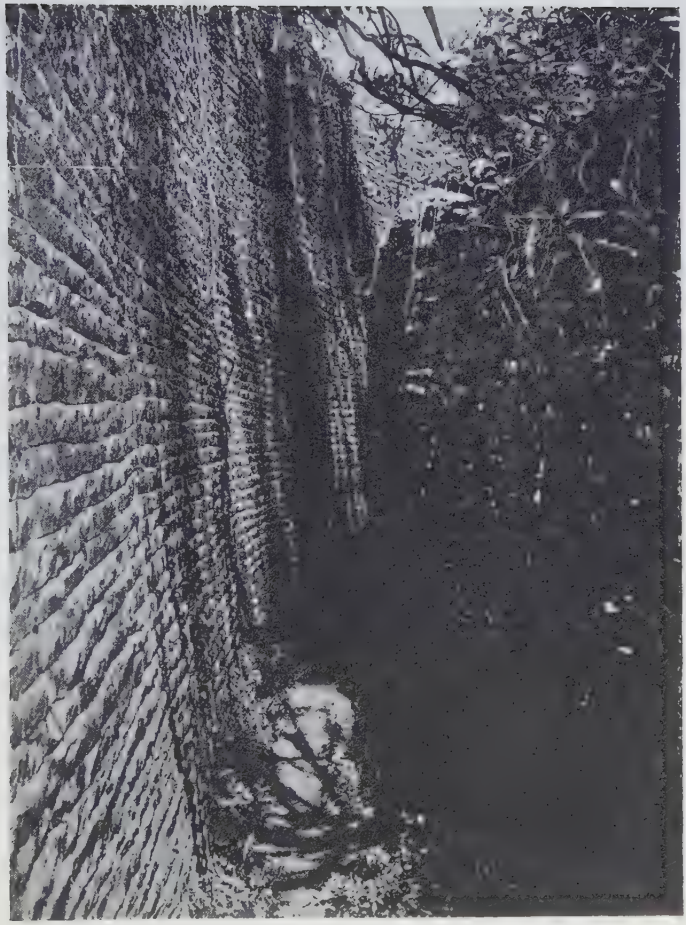
Monoliths.—These, as explained in Chapters iii., ix., and xii., are believed to have been gnomons for measuring shadows caused by the sun, or for the observation of stars at their culminations. There are several large monoliths on the south-east wall of the elliptical temple, some of which have

fallen down. Evidences exist that they were equidistant. One of the largest standing was measured by Sir John Willoughby and found to be fourteen feet three inches in length. This stands ten feet eight inches above the accumulated soil and twelve feet three inches above the top of the old cement floor. The foundations in which it once stood still remain in good condition. The shadow of the monolith is believed to mark with great accuracy the occurrence of the solstice. It is believed that the other monoliths erected at intervals on the wall served to indicate the sub-periods of the year.

The plateau of the Acropolis was once adorned with huge monoliths and decorated pillars of soapstone, one being eleven feet six inches in height. The curved wall at the western end of the Acropolis is surmounted with erect monoliths facing the sun at the winter solstice.

A fractured soapstone beam eleven feet long was found by Mr. Bent at the highest point of the Acropolis carved with chevron pattern, with images of the sun and other geometrical patterns placed between the bands. This beam acted as a centre for a group of beams. Two other curved soapstone beams were also found here.

Cones, towers, and buttresses.—In the elliptical temple is a circular tower just inside the south wall, and which is believed to have originally been thirty-five feet high. The diameter of its base, which is below the cemented flooring, is 17·17 feet, and at its present level summit is thirty-one feet high, with a diameter of four feet. Messrs. Mauch and Bent and others have proved that this conical tower, which has a battering of excellent workmanship and courses wonderfully true, is perfectly solid. The foundations of this tower do not reach the formation rock. Unfortunately Karl Mauch in examining this tower destroyed a portion of the dentelle pattern which runs round part of the tower near its summit.



THE PASSAGE, ZIMBABWE

A few yards to the north-east of this tower is a smaller one, also proved to be solidly built.

The foundations of what apparently were conical towers are also found in No. 1 Ruin.

"In the ruin (No. 1 Ruin), sixty-two yards to the north of the elliptical temple, is," says Sir John Willoughby, "a curious conglomeration of buttresses on the south side, which leads up to, and apparently culminates in, the highest point of the outside wall, which partially commands a view of the interior of the temple. The buttresses referred to are carefully built on the outside, but their interiors are simply filled in with a mass of stones piled one upon the other."

In the Acropolis Mr. Bent counted seven round towers, and others had been destroyed. These towers alternated with monoliths on the summits of the walls.

Buttresses of another class to those mentioned above form a great feature in the temple and other buildings, and are evidently designed for the purpose of protecting entrances and passage-ways, especially in the Acropolis. The west entrance to the temple has large rounded buttresses on the inside on either hand, and several of the divisional entrances still show by their foundations that they also were buttressed, while the entrances into the sacred inclosure, in which stand the conical towers, are also carefully buttressed. In the narrow ascending passage of the Acropolis are six buttresses, rendering the passage zigzag and tortuous, and therefore easy of defence.

ZIMBABWE NOTES.

Soapstone.—A soapstone quarry is about fifteen miles north-west of the ruins. This was, most probably, the quarry from which the ancients took the soapstone of which some of the monoliths, beams, bowls, game stones, and the emblems of Phallic worship discovered here were made. This stone is found in several parts of Rhodesia. It is still employed

by the natives in making pipes for smoking *I-daha* (hemp); it lends itself easily to the tool of the artist, and is very durable.

Cryptogram.—The Himyaritic writing once alleged to have been carved on the outer wall of the temple has now been shown never to have existed, at any rate, there are no signs of its having been destroyed or removed.

Gold furnaces.—The ancient gold-smelting furnaces were not built up from the ground, but sunk into the floors. Sir John Willoughby found three of these holes close together in the floors of an elliptical ruin (No. 3 Ruin on his map) lying very slightly west of half-way between the elliptical temple and the Acropolis. The built-up furnaces which Mr. Bent found on the Acropolis, and which he alleged were gold-smelting furnaces, have since been shown to be old Kaffir iron furnaces (see Chapter vi.), but portions of ancient crucibles showing gold in the flux have been found by several explorers on this hill.

Native furnaces.—Portions of the ruins have for many succeeding generations of natives been used for their iron-smelting industry, and débris heaps of their slag, smelted iron, and ashes are found in abundance. The local natives affirm that the Barotsi, who now live north of the Zambesi, and who are known as a nation of ironworkers, once occupied these ruins. The remains of Kaffir furnaces are still to be seen in several of the ruins.

Caves.—Caves within the ruins have been extensively utilised by the ancients and floored with cement. There is a cave under the largest and highest rock in No. 3 Ruin (in Sir John Willoughby's plan). There are two caves at the extreme south and south-east parts of the Acropolis, and others may possibly be discovered. There are also caves in some of the kopjes beyond the area of the ruins, and in these certain ancient relics have been discovered.

Irish Archæological Society.—Mr. King, representative of this society, visited Zimbabwe with Mr. Bent.

DIVISIONAL WALLS INSIDE ELLIPTICAL TEMPLE AT ZIMBABWE

Earthquake.—Tradition prevailed among the Arabs of the eleventh century that Zimbabwe was destroyed in the fifth century by an earthquake.

A correction.—The gold stated in *Monomotapa* (Chapter xvi.) to have been found by Mr. Burnham at Zimbabwe was actually found by him at the Dhlo-dhlo ruins.

Jesuit chapel.—No traces of the chapel of the Jesuit missionaries (1560–1760), stated in *Monomotapa* to have been erected at Zimbabwe, have been discovered.

Parallel walls.—No other ruin than the elliptical temple, in Rhodesia, so far discovered, has an inner wall running parallel with the main outer wall.

Roofed passages.—At one point on the south side of the Acropolis, between the precipice and high boulders, the internal masonry, which is very huge and massive, is pierced with roofed-in passages. These are the only examples of this work yet found in Rhodesia if we exclude the long entrance through the front wall of the Umnukwana ruins.

Alan Wilson Memorial.—The remains of Major Alan Wilson and his companions, who were killed at the Shanghani whilst pursuing the fugitive king Lo 'Bengula, were removed from the Shanghani and interred between the Temple and the Acropolis at Zimbabwe, and a monument now marks the spot.

Water.—Water can be obtained from a spring near the temple or from a stream on the north-west side. There is also a good stream six hundred yards to the east, and this drains the valley between the Temple and the Acropolis. There are also pools in marshy tracts along the tributaries of the Umshagashi River, which is four miles distant to the east.

Morgensterne Mission.—This mission station lies south-east of Zimbabwe, and is about one and a half hours' walk from the ruins.

The ruins and gold-reefs.—Zimbabwe is built upon the

granite formation, and is distant between five and twelve miles from the nearest points of any gold-reef. This distance from a gold area is the greatest yet known of any ruins, save those of road-protecting forts, being from the quartz formation. One peculiarity has struck several writers who have visited these ruins, namely, that on the gold-reefs of this district there have been no traces so far discovered of any ancient workings for gold. Notwithstanding that gold-winning was the primary object of the ancients, and that here must have been a large population interested in gold-mining, the reefs in this district are absolutely virgin.

The following reefs in this district on which claims have been developed show no signs upon them of having once been worked for gold by the ancients :—

Cotopaxi.	Scotchman.
Victoria.	Ben.
Northumberland.	Texas.
Zimbabwe.	Balmoral.
Birthday.	Albion.
Natal.	Emerald.
Natalia.	Hillside.
Horse Shoe.	Ironclad.
Elleslie.	Tarranrua.
Doomsday.	Tweed.
Standard.	Dundee, etc.

Possibly the reason for the ancients ignoring the gold-reefs of this district lies in the fact that the country round about is exceedingly well suited for agricultural purposes, the soil being rich and water plentiful, and all vegetable growth prolific and profuse. The large population of ancients, together with the enormous gangs of slaves, would naturally consume a vast quantity of grain, and this necessity would create a large agricultural class, who for their own safety and for the protection of their crops and fruits would naturally

ACROPOLIS AT ZIMBABWE, SHEWING MONOLITHS IN POSITION ON WALLS

carry on their operations within such an area as could be safeguarded by the fortresses of Zimbabwe.* In almost every point in connection with the ancients the evidences of motive for protection are most patent. The Victoria district, in which Zimbabwe is situated, is to-day admittedly the premier grain district of Rhodesia.†

* Mr. Franklin White, speaking of the location of ruins generally, states: "The builders seem to have selected in preference an agricultural country with positions easily defended. The granite areas, with their numerous streams, bare knolls, and scattered boulders, would best comply with these requirements."

† Sir John Willoughby writes: "With Mr. Swan's suggestion, that the inhabitants of Zimbabye obtained their gold from the recently discovered gold-belt of Victoria, I entirely disagree. Though the gold-belt, now known to extend for at least eighty miles, with a breadth varying from ten to fifteen miles, has its nearest point within five miles of Zimbabye, there are no traces of old workings anywhere throughout its whole area, and its reefs up to their recent discovery were 'virgin reefs.' Therefore the Zimbabye people must have obtained all their gold from the many old workings of the more remote gold-belts, though they may possibly have obtained some small portion from washings in the beds of the numerous intersecting streams."

CHAPTER XIV

KHAMI RUINS

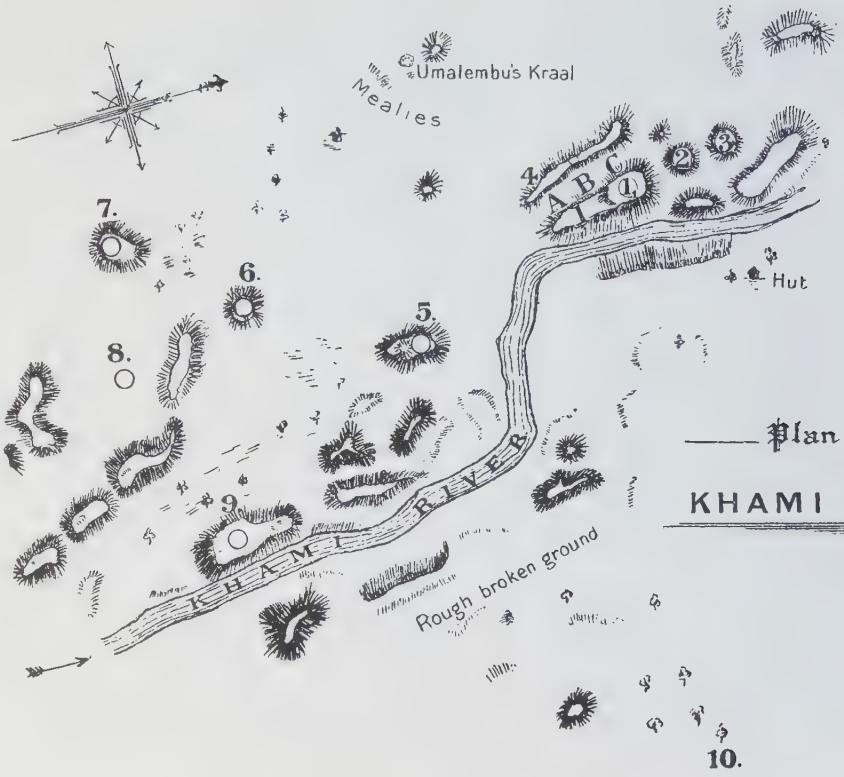
Situation.

THESE groups of ancient ruins are situated on the Khami River, and with the exception of No. 11 Ruin, are on the Hyde Park Farm, which is owned by Colenbrander's Matabeleland Development Company, Limited. They are about twelve miles west of Bulawayo. The road passes through the Brickfields and over the ridge of land beyond till the valley of the Khami is reached. The road descends into the valley in a north-westerly direction till it comes close to the river, when it follows the right bank till it strikes the drift. Several roads lead off to the left, but the right-hand road must always be followed.

Visitors to the ruins can camp either on the east or west bank of the river. All the ruins, except No. 10 Ruin, are on the west bank of the river. If the east bank is to be reached, a waggon-track to the right, leaving the road two hundred and fifty yards the Bulawayo side of the drift, must be followed for a mile. This track passes close to the north side of No. 10 Ruin and leads to some broken ground near the waterfalls and a hut, directly facing the main ruins, which are on a high kopje on the opposite bank of the river.

Should visitors wish to camp on the west side of the river, which is generally considered the more convenient for inspecting the ruins, the drift on the main road must be crossed, when an old waggon-track must be taken leading

○ 11.



Plan of

KHAMI RUINS

towards the north-west for about a mile, passing between Nos. 7 and 8 Ruins and close to Nos. 6 and 5 Ruins until the main ruins on a high kopje are neared, on the west of which is a native kraal with mealie gardens.

The ruins are situated in a most picturesque district, finer than any other part of the country within the same distance of Bulawayo. The granite kopjes are many and romantic, those on the banks of the river sheering down precipitously into the river-bed, making the course of the water very broken. There are very fine open park-like spaces interspersed among the kopjes.

The ruins of major importance number eleven, and are situated on separate kopjes, while numerous minor ruins are scattered about between the larger ruins.

Extent.—These ruins cover an area of over two square miles.

Apart from the eleven distinct ruins described later, there are on other kopjes sections of walls of Zimbabwe construction and also débris heaps. Débris four feet and five feet deep covers scores of acres of ground in the open valleys at very considerable distances from any of the ruins. Any large ant-bear hole shows pottery with chevron and herring-bone pattern buried at three or four feet in the sides of the hole. It is quite probable that other ruins may yet be discovered here.

Importance.—These ruins must have formed an important centre for the ancients in this part of the country, and evidently were the capital town for a large gold-mining district, extending probably from the north-west of the Matoppas on the south towards Shiloh on the north, and from the head-waters of the Gwaai on the west towards Essex Vale on the east, in which district there is no other capital town, though there are numerous ruins of mino

importance lying around Khami in an extended circle, for which Khami would serve as a centre for worship and for business. Probably the gold won within this area was brought to Khami, as it is only at Khami that there are evidences within this district of gold-smelting operations having been carried on. The traces of gold-smelting at Khami are distinct, especially at No. 3 Ruin.

There are evidences in the many large buildings and in the numerous minor ruins at Khami that this place must have carried an exceedingly large population. The débris heaps outside the various ruins are enormous, notwithstanding much of them must have been carried away by the river. Some of these heaps extend for several hundreds of yards, and are still fifteen feet deep in the places opened out. The lower and older débris heaps have been built over during one of the later Zimbabwe periods, and are covered over with flooring made of granite-powder cement. Bits of the more ancient pottery are not only discovered in or near the ruins, but can be found anywhere in great quantities at considerable distances from the ruins. It is highly probable that the general body of the population occupied all the valleys round these ruins, as signs of their having been occupied are plentiful.

Construction.—All these ruins are built on the granite formation and of granite blocks. In some places, notably in Nos. 2 and 3 Ruins, diorite blocks have been inserted both singly and in whole courses. The buildings are far less massive in character than those at Zimbabwe. There have been numerous reconstructions and extensions of later periods. Each one of the four Zimbabwe periods of architecture is represented here, though that of the first period is only slightly in evidence. The workmanship in the walls, courses, and patterns includes the most elaborately finished masonry as well as that of the very rudest construction.

WALL AT KHAMI RUINS SHEWING CHECK PATTERN

Ornamentation.—The only Zimbabwe patterns of ornamentation present in the walls are those of the herring-bone and check or chessboard design, the latter largely predominating. Herring-bone pattern is present in Nos. 1, 3, 6, and 8 Ruins, while check pattern is found in almost every one of these ruins. An instance of gross vandalism, committed since May, 1900, is noticed in No. 8 Ruin, where an almost entire course of herring-bone pattern, and also a rounded buttress of oldest type, have been demolished.

The ornamental patterns face the following points:—

No. 1	Ruin, Plateau	A.	Ck. . .	W.
„ 1	„ „	C.	Ck. . .	S.E. and N.
„ 1	„ „	C.	H. . .	S.W. (2) N.W.
„ 3	„ . .		Ck. and H.	S.E.
„ 5	„ . .		Ck. . .	W.
„ 6	„ . .		H. . .	W. to N.W.
„ 7	„ . .		Ck. . .	E.
„ 8	„ . .		Ck. . .	W.
„ 8	„ . .		Ck. and H.	N.N.W.
„ 9	„ . .		Ck. . .	W.
„ 10	„ . .		Ck. . .	S.W. and W.

Period.—Khami Ruins represent all four periods of Zimbabwe architecture.

The first period is but slightly represented, and that only in Nos. 1, 2, 3, 5, 8, and 9 Ruins. In some of these ruins may be found the Zimbabwe batter-back of wall, the rounded entrances, the foundation on rock formation, curved lines of plan of building without angles or stepping-back of walls, with the same care both in masonry and decoration in inside of walls as outside, and a general massive character of the building, though all these features are not found together in one ruin.

The second period is represented in all the ruins, where are to be found the "wedding cake," or rising tier, or retaining

wall plan of architecture, with comparatively straight main walls, square ends of walls and right angles, square entrance walls, much less batter-back of walls, and frequent stepping-backs, superior workmanship on outside of walls and very inferior workmanship on inside of walls, foundations not always on rock formation, though this may be within a few feet, while the massive character of the buildings and width of foundations are not so marked as in the ruins of the first Zimbabwe period. The ruins at Khami of the second period present exactly the same features as are seen at Dhlo-dhlo, the architecture of which, except that of the temple, is believed to be of the second period.*

The third and fourth periods of Zimbabwe architecture are present in the extensions of almost every ruin, the style deteriorating till a very crude imitation of the true Zimbabwe building alone is noticeable. In these periods the older walls have been pulled down to provide building material for smaller buildings, while the reoccupiers during these later periods have promiscuously filled in the main buildings with stones taken off the top of the walls till the spaces inside were level with the reduced walls, when floorings of cement were laid over them, altogether covering over the original floors of the ancients, which are sometimes fifteen feet below the present floors. This filling-in process is a common feature of late Zimbabwe period. It is on the original floors of these buildings at a considerable depth below the present floors that the gold furnaces, gold ornaments, large gold beads, and cakes of gold of the ancients are to be found. Gold on the higher floors is far less plentiful and of more recent manufacture. No large quantities of gold have ever been obtained on the higher floors, except at Dhlo-dhlo,

* Messrs. Franklin White, Pofham, and Pingstone reported (May, 1900) to the Rhodesia Scientific Association at Bulawayo: "The centre of the walls at Khami is filled up with fragments of granite more or less loosely thrown together." This is the ordinary feature of the second period method of construction.

C. PLATEAU, No. 1 RUINS, KHAMI, LOOKING NORTH

where was found the gold belonging to the Portuguese Jesuit missionary.

GENERAL DESCRIPTION.

Main Ruins.—These are situated on a long and high granite kopje, which runs parallel to the river, from west of the waterfalls, and comprise Nos. 1, 2, 3, and 4 Ruins. This kopje along its summit is divided by a shallow gully or defile into two parts, the larger and higher part being on the east side. The gully was evidently the main approach to all the ruins on this kopje. Another gully runs up from among some kopjes on the western side, and joins the first gully at right angles just at the main entrance of No. 1 Ruin. The main gully averages about twenty feet in width, and ascending from the S.S.E. end of the kopje are No. 1 Ruins rising in three plateaux, A, B, and C, and Nos. 2 and 3 Ruins, all on the eastern portion of the kopje. Guarding the two gullies at several points are ruins of forts which must have rendered the main ruins almost absolutely impregnable. The main gully is so straight that from a rounded buttress jutting out of No. 2 Ruin one can see along its whole length.

The gullies leading up to the main ruins have been paved with cement throughout, no less than five pavements being one on top of the other. The lower cement is superior and the top floors inferior.

No. 1 Ruin.—This occupies three terraces or plateaux, A, B, and C, rising from the S.S.E. end of the eastern portion of the kopje to the summit, and are partly natural and partly artificial, retaining walls having been built and the spaces filled in level to the tops of the walls. The work of filling in these spaces is that of a late Zimbabwe period.

Plateau A.—On the right-hand side of the gully, about fifty or seventy feet from its S.S.E. extremity, is a comparatively straight wall rounding very slightly forward to the north-east. The highest portion of this wall is four feet

seven inches in height, and has check pattern facing west. About two feet in front of this wall on the gully side is a lower terrace or retaining wall with the space between the two walls filled in. On the north-east end of this wall is a passage-way with some few steps built of large stones still remaining, and this passage-way leads to the top of Plateau A, which has an area of about eighty feet by fifty feet.

The eastern side of the plateau is naturally protected by a precipitous fall of about two hundred feet down to the edge of the river. Great débris heaps extend along this declivity, and have a depth, where opened out, of from two to fifteen feet. The débris includes bones, ashes, charcoal, pieces of pottery with oldest Zimbabwe patterns, and also pottery of later date, portions of unmanufactured iron, many copper bangles, rings, beads, spear-heads, gold beads, gold tacks, gold wire and beaten gold, gold bangles, and smelted gold in pellets and cakes, also many clay whorls and pieces of ivory carved with herring-bone pattern. The top of portions of these débris heaps on the edge of the plateau overlooking the river is level with the top of the front wall which faces the gully, and this has been cemented over in Zimbabwe fashion with granite-powder cement, on the top of which can be seen the foundations of either very late Zimbabwe or of mediæval Makalanga buildings.

The surface of Plateau A shows floors of several circular buildings of granite blocks laid in true Zimbabwe style. Round the circular foundations on this plateau are to be seen the raised edges of the cemented floor of the plateau. These are about twelve inches in height and about twelve to fourteen inches in width, and are rounded off on the outside of the tops, as in many ruins throughout the country. These rounded-off edges form part of the cemented floor between the circular buildings.* This plateau shows several periods of architecture, and evidences of reoccupation are unmistakable.

* See p. 182.

No. 2 RUINS, KHAMI, LOOKING WEST

Plateau B.—This plateau (sixty feet by fifty feet) is on higher ground immediately adjoining the northern side of Plateau A. A terrace or retaining wall overlooks Plateau A, which has been filled up to the level of the top of the wall The approach to this plateau from Plateau A is on the south side at the west end of the terraced wall. The wall is about nine feet high and fifty feet long, and shows check pattern. On this plateau are circular inclosures of Zimbabwe workmanship, and these have been filled in with stones to the present level of the walls and cemented over. Round each of these buildings are the raised edges of the cement floor rounded off on the top outside.

This plateau, like Plateau A, is naturally protected on the eastern side by the precipice. Signs of general conflagration are noticeable, and gold beads of various sizes and patterns to the number of twenty were here found partially fused together, also small nuggets of tin fused.

Leading a portion of the way from the river-bed up the steepest part of the precipice to Plateau B is a flight of steps, evidently extending for at least sixty feet upwards to this plateau. Below the lowest point of the steps is a natural causeway leading to the edge of the river.

Plateau C.—This is the highest portion of No. 1 Ruin, and adjoins the north side of Plateau B, where is a long, terraced wall seventeen feet high, with check pattern overlooking Plateau B and facing south-east. The approach to this plateau is on the south-east side of this wall, which has immediately in front of it no less than seven retaining walls rising in tiers. The wall at this entrance is considerably broken down. Probably the flight of steps from the river might have again ascended to this plateau. To the right of the top of this entrance is an upright stone, about one and a half feet high, built into the top of the wall. This is believed by some to be a monolith, but nothing definite can be said regarding it.

On this plateau, which has an area of one hundred and eighty feet from north to south by eighty feet from west to east, are several circular inclosures, the protruding walls of which show the herring-bone pattern facing two different aspects — south-west and north-west. The architecture shows three periods of Zimbabwe style, with extensive additions. The east side of the plateau is naturally protected by the steepest portion of the precipice, which runs along the side of the kopje, but though so naturally protected, the face of the precipice is terraced with several rows of tiers of walls. From this plateau it is possible to throw a stone right into the river-bed.

On the corner of the north-west wall of this plateau, in which is check pattern, are inserted several blocks of diorite. The main entrance from the gully passage-way to this ruin is on the north-west side, and on this entrance the gully from the S.S.E. and the gully from the west converge. The wall on the north front has square corners with check pattern. Added to the north-east wall is a later extension of the original building built of very roughly hewn granite blocks.

No. 2 Ruin.—This is a ruin built on an elliptical plan, and is situated about thirty feet north of No. 1 Ruin at the north-east of Plateau C. The diameter of this building is about eighty feet. The main entrance is on the south-east side and has steps leading up to the summit. The left-hand side of the entrance is formed by a large boulder, but the right-hand side has a rounded wall. On the western front are terraces of rising tiers, with about five or six feet space between each tier. The lower tier is seven feet high, and the total height of the tiers is about twenty feet. The spaces between the tiers have been filled in, and a cemented floor has been laid on the top. On the south-west side of the lower tier is a rounded buttress extending out into the

No. 3 RUINS, KHAMI, FROM SOUTH-EAST, SHEWING SQUARED ENTRANCE WITH STEPS AND CHECK PATTERN ON WALLS

gully or passage-way leading to the entrance of No. 1 Ruin, Plateau C.

On the platform of this ruin, and at the south-west corner, is a large, oval-shaped, flat boulder on which were laid stones in the form of a cross, the upper portion of which was, till May, 1900, perfect. This was probably the work of the Portuguese Jesuit missionaries, about 1560–1750, who penetrated further into the country than did the Portuguese gold-miners. Unfortunately some thoughtless visitors, wishing to throw stones from this height, and unaware of the purpose for which the stones had been so placed, have almost entirely destroyed the pattern of the cross.*

No. 3 Ruin.—This ruin is situated on a low knoll about thirty feet north of No. 2 Ruin. It consists of a wall, a portion of a circle, a hundred and fourteen feet long, with an entrance from the S.S.E. in the middle of the wall, the side walls of the entrance (two and a half feet wide) being perfectly square. At the entrance are the remains of three flights of steps leading toward the centre. The wall on the outside has several rows of check pattern. Near the top there are blocks of diorite in courses, these blocks still showing the marks of the tools. On the extreme top course, facing south-east, are four tiles of diorite, the remains of herring-bone pattern (in 1898 this extended three feet) which probably ran along the whole length of the wall. This building has several levels of separate floors. Here were found two large pieces of copper on the lower floor below the soil, also portions of ancient gold crucibles found on the lowest and original floor. This ruin also has had several cemented floors one above the other. The gully side of this ruin is naturally defended by the drop of the boulders. The

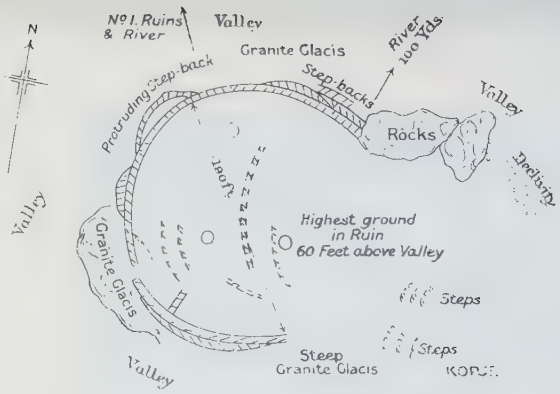
* In *Monomotapa* (Wilmot) it is clearly shown from Jesuit records that the Jesuit fathers penetrated into the more interior portions of Monomotapa without the support of soldiers or of Portuguese settlements. The advent of Portuguese troops was far later than that of the missionaries.

wall of this ruin is two feet six inches wide, the outer faces are built fairly well, but between the faces the space is filled in with granite splinters thrown in indiscriminately.

No. 4 *Ruin.*—This is evidently the ruin of a fort protecting the S.S.E. approach to the main ruins. It is a type of others which guarded the two defile approaches, only these are all in a far more ruinous state. No. 4 Ruin is situated on the left-hand side going up the hill of the gully at the S.S.E. end of the kopje, and faces Plateau A, and overlooks both the gully and the valley towards the west. This building is circular, and is constructed in the Zimbabwe style. Round it are rings of retaining walls which on the east side increase in height as the centre is approached. The inner building has an inside diameter of twenty-two feet, and is constructed of granite blocks with a very rough granite-powder cement lining about twenty-one inches thick which has been coloured black. There is a recess with rounded edges and of a few inches deep in the cement work on the north side. This ruin has been partially cleared out, and shows the original floor three inches thick. The architecture is decidedly of the second Zimbabwe period.

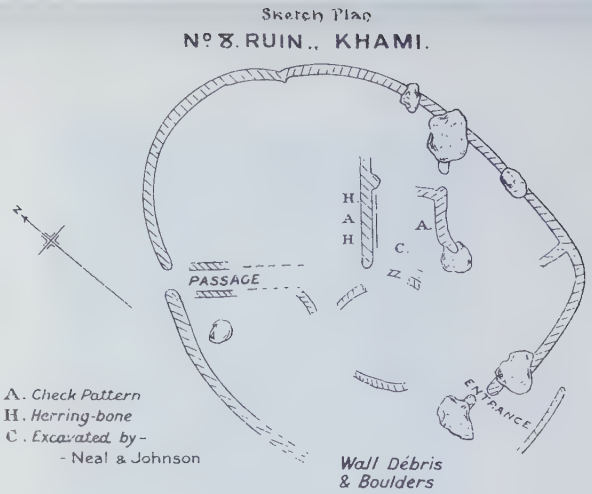
No. 5 *Ruin.*—This ruin is about midway between No. 1 and No. 9 Ruins. Its form is that of half a circle, and is built in two and three terraces with low retaining walls and step-backs. Walls still standing are on the outside about seventeen feet four inches high and two feet six inches wide. The masonry on the inside of the wall is almost as good as that on the outside. On the north-western extremity is an extension of later period with blocks of varying sizes mostly unhewn. On the west side there is check pattern. The southern end of the wall ends abruptly. The east side is perfectly open, and is naturally protected, except at intervals where there are remains of walls, by a precipice

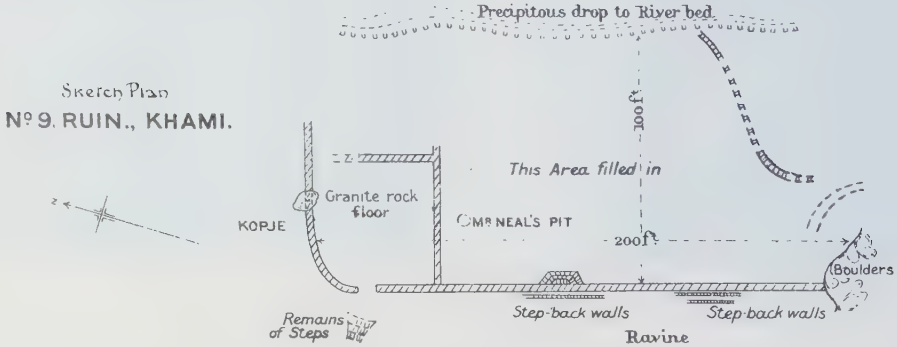
WEST AND SOUTH-WEST EXTERIOR WALLS OF No. 5 RUINS, KHAMI



Sketch Plan

No 5. RUIN., KHAMI.





Sketch Plan

No 9. RUIN., KHAMI.

WALL SHOWING HERRING-BONE AND CHECK PATTERNS
No. 8 RUINS, KHAMI

SECOND INNER ROUNDED ENTRANCE No. 8 RUINS, KHAMI

almost to the level of the valley. The length of the wall is about ninety-five feet. The main entrance is on the west side and is squared. At the south-west end of this ruin are traces of what may have been steps leading up to the kopje behind. This ruin is one hundred and nine feet from north to south and eighty feet from east to west.

No. 6 Ruin.—This ruin is situated about four hundred yards south-west of No. 5 Ruin. It consists of a long curved wall about five feet high and one hundred and fifty feet in length with check pattern interspersed, facing west to north-west. This ruin is almost entirely covered by bushes. The entrance is on the north-west side and has squared walls.

No. 7 Ruin.—This ruin is built up against the east side of a small kopje, and is about five hundred yards south-west of No. 6 Ruin. It consists of a wall forty-five feet long and eight feet high built on the plan of a portion of a circle with a diameter of about fifty feet. The walls show check pattern facing east. The courses are very irregular. The valleys around this ruin are covered with débris. A large boulder poised on other boulders occupies the central position of the ruin.

No. 8 Ruin.—This ruin lies three hundred yards to the east of No. 7 Ruin, and is situated on a low knoll in a valley between two high kopjes. This is a very pretty ruin. It has round buttress entrances into each compartment, of which there are six. The outside wall is of very good workmanship. On the west side the wall is curved with rounded entrance, without buttresses, but with squared corner walls with check pattern facing west. There are additions of a later period showing rude workmanship. Inside and facing the west entrance is an inside wall with two portions of herring-bone, also check ornamentation on the entrance side only, facing

N.N.W. This inner wall is about fifty feet long and six feet six inches wide on the present top. On the outside wall and facing the N.N.W. are herring-bone and check pattern, and on the outside of the south-west wall two courses of diorite have been introduced. The inner walls are dressed alike each side. The compartments have been filled in, but three of these have been excavated. No skeletal remains were found. In this ruin nuggets of tin have been discovered. Trees and bushes are doing considerable harm to the walls, the ruins being full of trees and shrubs. Since May, 1900, someone has almost destroyed one complete length of herring-bone pattern on the inner wall facing the north entrance, and has also destroyed one of the rounded entrances. The excavations showed a portion of a partition wall, and owing to the ruin having been filled up we are unable to give a detailed plan of the compartments, of which there may possibly be more than six.

No. 9 *Ruin.*—This is an important ruin situate on a kopje on the edge of the river to the east of No. 8 Ruin, between which ruins kopjes intervene. It has an area of two hundred feet by one hundred feet. To reach this ruin from No. 8 Ruin the nek between the two intervening kopjes must be crossed. The position of this ruin is extremely picturesque. The front wall facing the west is two hundred feet in length, and is built in two tiers, the total height being about twenty-seven feet. Width of tops of walls, two feet seven inches. This wall is most massive in character, and along the entire face of it are three courses of check pattern, facing west. The entrance has square walls, and there are remains of steps made of large stones leading up to the platform. The east side is protected by a precipice descending to the edge of the river. There are débris heaps on the side facing the river. On the north-west side of the platform is a large boulder inclosed in

NORTH-WEST WALL, No. 9 RUINS, KHAMI

the wall, the joints showing very neat workmanship. The inside area has been filled in up to the level of the tops of the walls, except at the northern end.

No. 10 *Ruin.*—This ruin is on the east bank of the Khami River, and is built upon a knoll. The front facing the west is comparatively straight and consists of two walls running parallel to each other for about eighty feet. The front wall is about three feet high, and the second wall, which is three feet behind it, is seven feet high. The inner wall shows check pattern along its whole front, facing south-west and west. A third inner terrace runs parallel to the other terraces at a distance of seven feet. A fourth terrace runs parallel to the third one only at a distance of five feet behind. The tops only of the last two terraces can now be seen, and these show later and ruder workmanship. All the spaces between these terraces have been filled in and cemented over with a flooring of six inches in thickness.

On the north-west side of the front wall is an entrance with square walls. The passage is about six feet in width and extends some distance into the building. The side walls of the passage are well built, but they have no ornamentation. The inner wall foundation of a circular building with a diameter of fifteen feet is only just visible, and inside and outside is smoothed cement work. In addition there are foundations of other buildings leading up to the summit inside the ruin. Apparently a stairway connecting the entrance with the summit once existed, as there is a well-defined upper passage leading between two boulders to the summit of the ruin, and on the granite blocks can be seen the marks of tools.

The north-west side is naturally protected by a declivity. On the south-east side there is a rude imitation of Zimbabwe style building running round for about thirty feet on the outside edge of the ruin, and on the east side this is continued

by a retaining wall made of conside ably larger granite blocks.

Large full-grown trees, bushes, and monkey ropes completely fill up the space within this ruin, so much so that one has to stoop considerably to move about in it. The roots of these trees and bushes are breaking down portions of the ancient walls.

There is a large débris heap within the building, and débris must have been thrown over the walls on to the sloping veldt around, but centuries of heavy rain has spread this all over the veldt to a considerable distance, and this has been covered almost over with soil, as bits of ancient pottery can be found three feet deep embedded in the sides of ant-holes and ant-bear holes at great distances from this ruin.

No. 11 *Ruin.*—This is the most south-westerly ruin of the Khami group, and stands on the west bank of the river, from which it is distant about seven hundred yards. This ruin is also one thousand yards south of No. 7 Ruin. It consists of a circular ruin with a diameter of sixty feet. The walls still standing are four feet high and eighty feet in length, and show check pattern. On the north side the wall is poorly built, but on the west side the courses are fairly regular. The east side has low retaining walls. Diorite has been introduced in the courses. The better portion of the walls has a well-built outer face, but splinters and unhewn stones are filled in behind it without any arrangement or order.

General notes.—Khami is one of the only ruins in Rhodesia where, so far, flint tools (conjectured) have been found. Flint strata runs through the site of Khami, and extends considerably in several directions. The débris heaps are full of small portions of flint.

Quantities of grape vines and fig trees grow round about the ruins and in the intervening spaces. These have now

ROUNDED ENTRANCE, No. 8 RUINS, KHAMI

PORTION OF WEST WALL, WITH CHECK PATTERN, No. 10 RUINS,
EAST BANK, KHAMI RIVER, NEAR BULAWAYO

become wild. Wild vines and fig trees are to be found at almost every ruin in Rhodesia (see Chapter ix.).

The immense sizes of the débris heaps are astonishing, and denote both long occupations and a large population. On the eastern flank of Nos. 1 and 2 Ruins are still many thousands of tons of débris, notwithstanding that heavy rains and the river must have washed away great quantities, beside which all these débris heaps have not yet been opened out. The river-bed is rocky, and in the crevices during winter-time it is possible to find bits of ancient pottery and gold beads and pellets. The heaps extend from the south-east end of No. 1 Ruin on the west side of the river considerably beyond No. 3 Ruin.

Messrs. Neal and Johnson made explorations in these ruins from January, 1900, to end of April the same year, but mainly directed their attention to the passage-ways of Nos. 1 and 2 Ruins, the débris heaps on the eastern side of Plateau A, and also No. 4 Ruin and No. 8 Ruin, both of which they partially explored. The soil and débris were crushed by a small dry-crushing machine and washed. Altogether they recovered over forty ounces of gold in beads, tacks, wire, small portions of gold bangles, and pellets, all of which must have become lost by the ancients during their periods of occupation.

On the eastern side of the main ruins can be seen where the granite has been quarried by the ancients for building purposes. The ancients also stripped layers off the boulders of granite. The splinters of granite made in squaring the blocks are still to be seen.

Khami Ruins are, so far, practically unexplored. The temple is still buried under the present floors. The original floors of the builders of these ruins, unless destroyed by later occupiers, are not opened out, nor are the floors on which the gold-smelting furnaces will, in all probability, be found.

In all probability the china found here, which is undoubtedly old, was brought by the Jesuit missionaries, who are

believed to have occupied Khami, or some spot close to. This china was found at a depth of over seven feet. Similarly glazed china was found at Dhlo-dhlo, but with a different pattern.*

One noticeable fact concerning these ruins is the vast amount of destruction to the ancient walls, caused by trees and bushes bulging out their sides and splitting them apart. Some steps should be taken to protect the ruins from the injury caused by the trees, and also to prevent a repetition of the vandalism of visitors, as shown in Nos. 2 and 8 Ruins.

The "finds" at Khami are described in Chapter xi.

* The china which experts have pronounced to be Nankin china is found in almost all parts of Rhodesia which were occupied by the Portuguese (1560–1750), especially in the Mazoe Valley.

No. 9 RUINS, KHAMI, SHEWING BOULDER OVER WHICH WALL IS CARRIED

CHAPTER XV

RUINS IN THE M'PATENI DISTRICT, BELINGWE

UMNUKWANA RUINS

Situation.

THESE ruins are situated on the head-waters of the Bubi River, in the Belingwe district, and are one and a half miles south of Messrs. Weir and Edwards's trading station at M'Pateni, and three miles north-west of Gombo's kraal. They are on the summit of a high and oval-shaped granite kopje, which rises about ninety feet. The Bubi River runs half a mile to the south-east of the ruins. The country round about is exceedingly picturesque.

Period.—The ruins are believed to have been erected during the first period of the Zimbabwe architecture. The following characteristics of this period are present in these ruins: rounded entrances; masonry of the inside walls equal in workmanship to that of the outside walls; the oldest Zimbabwe batter-back of walls, especially of the wall on the north-west front; the foundations on the formation rock; and the general massive character of the buildings. What may be the only exception to the first Zimbabwe period is the square entrance on the north-east side. The rising tier or terraced plan of architecture and other peculiar features of the second period are altogether absent.

Importance.—This was evidently the capital town and centre for the districts now known as Filabusi, North Belingwe, and a portion of East Gwanda, which contain at

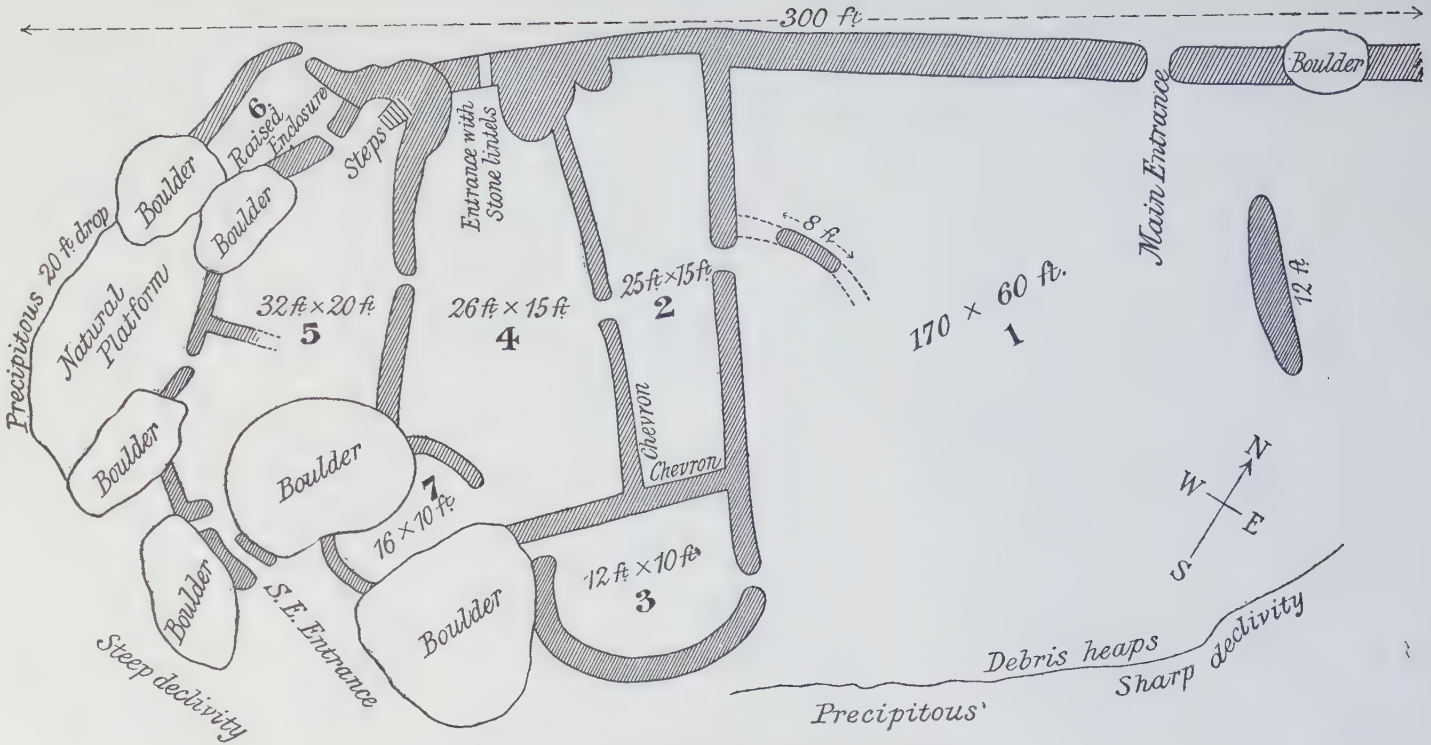
least fifty minor and dependent ruins. This was evidently the gold-smelting centre of this district, for none of the minor ruins show evidences of gold-smelting operations having been carried on. The temples at these ruins must have served for the whole district.

Extent.—These ruins cover an area of three hundred feet by sixty feet.

Construction.—The foundations of this ruin are on bare sloping rock, descending at an angle of thirty-two degrees to the ground below. Owing to their having only been partially filled in by later occupiers, it is possible to make a full examination of the inner inclosures. Six very large boulders have been utilised by the builders to strengthen the position, and these are connected by walls. The main wall is of a very massive character, being seventeen feet six inches in height, with a base of thirteen feet, and the present tops are seven feet broad. Between the rock surface and the cemented floors is a thick layer of ashes, probably as a protection against white ants. The layer of ashes is to be found under the original cemented floors of almost every Zimbabwe ruin.

Ornamentation.—The only ornamentation in these ruins is in No. 2 inclosure, and this is of chevron pattern. It extends the whole length of the south inside wall and also for seven feet along the west inside wall. This is about twelve feet from the original floor.

General description.—The front of this ruin faces the north-west and is about three hundred feet in length, seventeen feet six inches in height, with a base of thirteen feet, and the present tops of the walls are seven feet wide. The main entrance is on the easterly end of the north-west front, and is about five feet wide and has rounded walls. To the left of this entrance the wall is continued over and beyond a large boulder, the inside of which slopes down into the ground inside of No. 1 inclosure.



UMNUKWANA RUINS, BELINGWE DISTRICT

No. 1 inclosure has an area of one hundred and seventy feet by sixty feet, and the floor is cemented over. It is bounded on the north-west by the main front wall, on the east partially by a wall twelve feet in length and six feet high, of good workmanship, which begins and ends abruptly, and has rounded ends. This wall is immediately behind the boulder over which the wall is carried. The western side of this inclosure is formed by a wall sixty feet in length, in which are rounded entrances into Nos. 2 and 3 inclosures, while the southern and south-eastern sides of the inclosure are bounded by a very steep precipice with a drop of about sixty feet.

Exactly between the boulder in the main wall and the twelve-foot wall on the eastern side of the inclosure was found a skeleton of an ancient with gold ornaments, including finely made gold bangles, large beads weighing 2 dwts. each, and one bead weighing 1 oz. 14 dwts., also smelted gold, one copper ingot, pair of double iron bells, a boss or rosette of beaten gold with a representation of the sun image, and a large soapstone bowl.

On the west side of this inclosure and fronting the entrance into No. 2 inclosure is a stone wall, of good workmanship, five feet in length and three feet high. This wall is rounded at the south-east end.

Inclosure No. 2 is on the west side of No. 1 inclosure, and is bounded on the east by two walls twenty feet and ten feet, and on the south side by the divisional wall separating it from No. 3 inclosure, on the west by the divisional wall separating it from No. 4 inclosure, and on the north by the front wall of the ruins. On the southern and part of the western inside walls is the chevron pattern before mentioned. The walls of this inclosure are about nine feet to twelve feet in height. The floor has been excavated throughout down to the original floor of the builders, but no discoveries were made.

No. 3 inclosure is approached through a rounded entrance at the southern end of the west side of No. 1 inclosure, the walls of which form its eastern boundary. The south side is formed by a massive wall of elliptic form, extending round to a large boulder on the western side, up against which it abuts. The northern boundary is formed by southern divisional walls of Nos. 2 and 4 inclosures. The walls now standing are about nine feet high. In this ruin were found the skeletons of a woman and child of the earliest period, with whom were buried fourteen ounces of gold ornaments. Two very small baby's bangles made of gold were also found.

No. 4 inclosure is twenty-six feet by fifteen feet, and has three entrances, one from No. 2 inclosure with rounded walls, another from No. 5 inclosure also with rounded walls, while a third entrance is through thirteen feet of the main front wall of the ruins. The peculiarity of this entrance is that it is a covered entrance, similar in position and construction to the covered-in entrance seen in the Ortu ruin of the nauraghe in Sardinia, and this is the only one of its sort yet found in Rhodesia. This entrance at the outside is eighteen inches wide, and broadens out to three feet inside. The lintels are made of large stone slabs throughout its own length, across which the main front wall is carried. This inclosure has a cemented floor, which has been exposed all over the area. No skeletal remains were found nor any discoveries made. The walls of this inclosure are all on the bare solid rock formation.

Near the west side of this covered way is a wide wall separating this inclosure from No. 5 inclosure, from which wall protruding into No. 4 inclosure is a prominent rounded buttress. This buttress is ten feet in diameter at base and four feet at summit, and is ten feet high. The top has been cemented, but in some places the cement has broken away. A flight of two steps leads from the floor of No. 5 inclosure

on to the summit of this platform, from which a good view of the whole of the ruins and of the surrounding country can be obtained.

No. 5 inclosure is to the west of No. 4, and at its broadest part is thirty-two feet, but narrows both towards the front main walls on the north side of the inclosure and also towards the south side, which is the highest portion of the kopje, where is the south-western entrance to the ruins, which opens out into this inclosure. This entrance is not more than two feet wide, and lies between two immense boulders, the space between which is reduced by walls built against the sides of the boulders to a height of five feet. This inclosure is bounded on the eastern side by the divisional wall, which separates it from No. 4 inclosure, from which there is a rounded entrance. On its western side is No. 6 inclosure; a very long boulder, also the wall, eight feet high, dividing off the natural platform, described later, a second large boulder, and a wall connecting this boulder with a third boulder. The entrance to the natural platform at the extreme west of these ruins has a lintel made of a piece of wood about five feet in length, across which the wall is carried along.

The south-west entrance, which has rounded walls, extends inwards for about twelve feet. On the west side of this entrance is a paved recess in the wall going back to the boulder. This was probably a sentry shelter. The entrance walls have been fully fifteen feet high.

No. 6 inclosure has an area of twelve feet by ten feet, with a floor lower than any other portion of the ruins. It has an entrance from outside at the western end of the front main wall, which entrance steeply inclines into the interior of the building. This entrance has rounded walls.

No. 7 inclosure has an area of sixteen feet by ten feet, and lies between two large boulders, and is walled in on the south-west side and also on the north-east side, with an

entrance from No. 4 inclosure facing the east. Underneath the floor was found a considerable amount of the most ancient pottery, also ashes and bones. This débris, passing through the dry-crushing mill, yielded a fair result in gold beads and pellets; also a very large number of broken crucibles with gold in the flux and portions of blow-pipes with gold on the nozzles were found. Probably it was in this inclosure that the ancient gold-smelting operations were carried on.

General notes.—Débris heaps extend all along the north, west, and south sides of these ruins down to the lowest level of the ground surrounding the ruins. In these heaps were found portions of gold crucibles, blow-pipes, gold beads of all sizes, and much broken pottery.

The most interesting features of these ruins are:—

(1) The covered entrance with stone lintels, this being the only one yet discovered in Rhodesia.

(2) The cone-shaped buttress with steps to the platform on the summit, similar to those found at Zimbabwe, Mundie, Chum, Thabas Imamba, and other ruins.

(3) The discovery of the double bells, gold rosette, with sun image, and copper ingot.

(4) The numerous groups of minor and dependent ruins of the first and second periods in this locality—not less than thirty—some of these groups including several distinct ruins.

Finds.—Zimbabwe periods. Finely made gold bangles, two with chevron pattern, large gold beads weighing 2 dwts. each, one bead weighing 1 oz. 14 dwts., pieces of smelted gold—in all 72 ozs., certified to be of a higher standard value of gold than that in British gold coinage.

Boss or rosette of beaten gold with sun image embossed, a common object in Phallic decoration and similar to the knobs on the sacred cone of the great Phœnician Temple of the Sun at Emesa, in Syria (Herodian, bk. v. p. 5). This

is now in the possession of Mr. Rhodes. Eleven of such rosettes were found at Zimbabwe.

Double iron bells, similar to the three double iron bells found at Zimbabwe by Mr. Bent. These are believed by authorities to be ancient; certainly they do not belong to local natives or to the Portuguese. Similar bells have been found on the Congo, also at San Salvador in Angola. Some of these bells are in the British Museum. The bells found here were in the possession of the late Mr. Rhodes.

Soapstone bowl, eighteen inches across and two and a half inches in depth. This bowl has a double row of herring-bone pattern on the outside, and it is complete save that it is in two parts and that the rim is slightly chipped. This also was in the possession of Mr. Rhodes. This is similar to a bowl discovered by Sir John Willoughby at Zimbabwe.

The larger quantity of the pottery found here is believed to be of the Zimbabwe periods.

Portions of ancient gold crucibles and of blow-pipes with gold on nozzles.

Period doubtful. Copper cross-bar five inches long, in form of a double-headed claw hammer. This is the third found in this country. The first was found in 1891 in some ancient ruins (not Zimbabwe) near Victoria, in Mashonaland, and was given to Dr. Rutherfoord Harris, from whom it passed to Mr. Rhodes. The second was found by Father Richardt, in the Mazoe district (see Chapter xi.).

LITTLE UMNUKWANA RUINS

Situation.—Quarter of a mile north of Umnukwana Ruins in the direction of Messrs. Weir and Edwards's store at M'Pateni. A footpath between the store and Umnukwana Ruins passes alongside these ruins, which are located on a very low knoll. The country is open, and the ruins are surrounded by native mealie gardens.

Period.—The architecture of these ruins is of the first Zimbabwe period. The plan of the building is elliptical, the workmanship superior, and the same care has been bestowed upon the inside walls as upon the outside. The entrance has rounded walls. The walls are fairly massive.

Importance.—These ruins are of minor importance, there being no evidence of gold-smelting operations having been carried on, nor apparently was there any temple.

Extent.—Ruins cover an area of seventy feet by thirty feet.

Ornamentation.—Decoration is on the outside of the east portion of the wall, and consists of a length of eight feet of herring-bone pattern, which begins and ends abruptly in the wall. This decoration is about five feet from the ground. The pattern is composed of stone tiles twelve inches in length, and these are by far the largest stones used in herring-bone in any ruins yet discovered. The usual length of such tile-shaped stones is three inches.

Description.—The walls still standing measure one hundred and sixty feet all round, the highest portion being nine feet high, width of base five feet, width of top of wall four feet. The entrance is on the west side. The north-east side is perfectly open. The ruin contains three inclosures which have been only partially filled in by reoccupiers. The northern inclosure still shows the original floor of the builders.

Notes.—No finds of any importance have been made in these ruins.

The interesting feature of these ruins is the unusually large-sized stone tiles used in the herring-bone pattern.

CHECK RUINS

Situation.—These ruins are situated in a hollow on the top of an isolated, bare, whale-back, granite kopje, rising out of level country, from which a very extensive view of

the district can be obtained. Passing the kopje, it is impossible to see the ruin, and even on ascending the kopje it is not until one passes over the upper ridge that it can be seen. This kopje is on the head-waters of a western tributary of the Bubi River, in the Belingwe district, and is fourteen miles south-west of the Umnukwana Ruins. A tributary of the Bubi passes within three hundred yards of the kopje on the west side. The best ascent to the ruin is on the east side.

Period.—First Zimbabwe period. The walls are of massive character, being five feet wide at the bases and three feet six inches in width at their present tops. The highest portion of the walls still standing is about twelve feet. The ruins are built on a system of curves, and the entrance walls are rounded. All the walls have the usual batter-back, both inside and outside, of the first Zimbabwe period, and show splendid workmanship, inside and outside, and in decoration equal any work of the first period.

Importance.—While these ruins cannot be exactly described as of major importance, they were by no means of minor importance. Their size, excellent workmanship, and exceptionally beautiful and extensive decoration, both inside and outside, and the fact that the original inhabitants were rich in gold ornaments, speak somewhat as to their importance. There are no temple remains as far as can be discovered. Possibly when the lower floors are opened out both temple and gold-smelting furnaces may be found.

Extent.—Area of ruins, excluding foundations extending beyond the present walls, covers at least an acre. In all probability the original area was very much larger.

Ornamentation.—This is the only ruin so far discovered in Rhodesia that is completely covered, both inside and outside, with decoration of the check or chessboard pattern. These are, for decoration, the prettiest ruins, save N'Natali, which in this respect they closely rival.

Construction.—These ruins are on the granite formation and are built of granite blocks. Owing to their having been only partially filled in during later periods, the inclosures and inner walls can be closely examined. No boulders have been utilised in the construction. The courses are very truly laid, and the blocks are of very equal size. Great pains appear to have been taken in the masonry of the decoration work. The floors are cemented throughout with the usual layer of ashes on the bed-rock, which is found under all the original floors of the first Zimbabwe period. Probably, as we have said, this universal practice was adopted as a protection against white ants.

General description.—The front and main entrance faces the W.S.W. and has rounded walls, the passage being six feet wide, and extending into the interior of No. 1 inclosure for about twelve feet. None of the inclosures have been filled in by later occupiers, excepting Nos. 2 and 3.

No. 1 inclosure is irregularly shaped, but at its longest part is seventeen feet and at its broadest part is about ten feet. This inclosure is bounded by Nos. 3, 4, and 5 inclosures, and by a wall connecting Nos. 3 and 4 inclosures.

No. 2 inclosure is about fourteen feet by ten feet, and has been filled up to three feet from the original floor.

No. 3 inclosure is about twelve feet by ten feet, and has been filled in up to the level of the present reduced walls. This is approached from No. 1 by a flight of three rounded steps of a late period.

No. 4 inclosure is twelve feet by eleven feet.

No. 5 inclosure is about thirty feet by eighteen feet. This is an open courtyard and still shows the original floor.

No. 6 inclosure is twelve feet by six feet.

General note.— The peculiar feature of this ruin is that all the walls are profusely covered with check pattern decoration.

Finds.—Zimbabwe periods. Portions of solid gold orna-

ments. Pannings of the soil from inclosures gave good return of fine gold. These ruins have not been explored.

WATOBA RUINS

Situation.—Two miles south, towards King's trading station, of the Umnukwana Ruins, in the M'Pateni district, on a heavily timbered and bouldered kopje. The best approach is from the south-west. The ruins command a good view of the surrounding district.

Period.—First Zimbabwe period. The walls are massive, with first-period batter outside and inside, and equally good workmanship on both sides, and they are on formation rock.

Importance.—Minor. A gold-working protection fort.

Extent.—Fifty-five feet in diameter.

Ornamentation.—None now visible.

Description.—Built of granite blocks. Width of walls at base, seven feet; at present top four feet and about seven feet high. Entrance on north-west side, no steps visible; two inclosures not filled in and showing original floors in fair state of preservation. The débris heaps are small.

Finds.—Fine gold, two small gold beads, copper beads and wire, bangles, and pottery of all periods.

ISIKNOMBO RUINS

Situation.—These ruins are on a high, prominent, and isolated kopje, located five and a half miles east of Gombo's kraal and one and a half miles south of Muesa Mountains, and three miles west of Messrs. Weir and Edwards's road, leading from their trading station at M'Pateni to their trading station at M'Tibi's. These ruins command a magnificent view of the surrounding country for a great distance, including several ruins in the vicinity.

One mile and a half to the north is the continuation of the twenty miles' line of ancient iron-workings, running from

east to west, on which line the Mundie Ruins are situated. The whole country on the Muesa Range is one continuous belt of ironstone covered throughout by ancient workings. This iron district has been the chief iron-producing centre in Rhodesia, both of the ancients and subsequent occupiers, and is that of the natives of to-day. This district most probably supplied the iron tools for the remoter parts of the ancient gold-workings (see chapter "Construction of Ruins," section "Tools"). It extends from the Naka Mountain Pass, crosses the Lundi River to Bochwa Range, and on to the Muesa Mountains, passing under these names.

The ruins are three miles from any water, but water once flowed in a creek close to the kopje, and this has since been diverted by natural causes.

Period.—The first Zimbabwe period. The workmanship shown in the walls is excellent. The walls are massive with rounded ends, and first-period batter of main walls inside and outside. The foundations are on the bed-rock and follow surface outline. The faces of the internal walls are of the same good masonry as on the outside.

Importance.—Apparently of intermediate order. This was one of the centres of the ancients' iron-producing industry, which was extensively carried on in and about these ruins, and doubtlessly supplied iron tools for the mines in the gold-producing areas in other parts of the country. This was also a gold-smelting centre of the ancients, for a vast quantity of ancient crucibles with gold in the flux and blow-pipes with gold on the nozzles have been found here.

Extent.—The present area covered by the ruins is about ninety feet by eighty feet, but this may have been larger.

Construction.—The ruins are on an elliptical plan of building. The bases of the main walls are seven feet wide and three feet six inches wide on the present tops, the highest portion of the walls still standing being eleven feet. The workmanship displayed in the building is excellent, but the

material is mainly inferior, being the only stone obtainable in the locality. Good stone for the more important parts of the building has been brought here from long distances. There are seven inclosures with the usual open courtyard. These inclosures have not been filled up, nor are there signs of re-occupation. The building has a cemented floor throughout, under which is the layer of ashes found under most floors of the earlier periods.

Ornamentation.—There is no decorative pattern in any of the walls now standing.

Description.—The main entrance is on the east side, and has rounded walls with no buttresses. The entrance is about three feet six inches wide throughout. There is a steep incline from the entrance to the highest point in the interior. The courtyard is thirty feet by thirty feet, and the seven inclosures average in size twelve feet by ten feet.

General notes.—The chief feature of these ruins is that they formed a centre of the iron industry of the ancients, while gold-smelting operations were also very extensively carried on here.

Finds.—Zimbabwe periods. Three skeletal remains with three and a half ounces of gold ornaments, principally iron bangles overlaid with gold bands. Each skeletal remains had a necklace of gold beads ranging in size from that of a pin's head up to that of ordinary Egyptian lentils. A very great quantity of ancient gold crucibles showing gold in the flux, also great quantities of blow-pipes used both for gold and iron-smelting furnaces. All pottery found here was of the oldest make and patterns. Gold beads and portions of beaten gold and gold tacks were found in the débris heaps, also copper beads, but few in number.

GOMBO'S No. 1 RUINS

Situation.—Three-quarters of a mile east of Gombo's kraal, on a low granite bluff in the M'Pateni district, and is approached from the west.

Period.—First Zimbabwe period. Walls massive, good workmanship inside and outside, and on formation rock; entrance walls rounded, elliptical plan of building.

Importance.—Minor. Probably a road-protecting fort.

Extent.—About twenty-five feet by twenty feet.

Ornamentation.—None.

Description.—Built of granite. Height of present walls, four feet to six feet; width at bases, five feet to six feet; width at present top, three feet. There are two inclosures. The entrance, with rounded walls, is on north-east side. No steps visible. Débris heaps.

Finds.—Gold-dust in small quantity and pottery of all periods.

GOMBO'S No. 2 RUIN

Situation.—On a high and well-wooded granite kopje nine miles S.S.E. of the Muesa Mountains, in the M'Pateni district. These ruins are best approached from the west.

Period.—First Zimbabwe period. Plan of building elliptical. Walls massive, batter-back on both sides, good workmanship, rounded entrance walls, foundations on rock.

Importance.—Minor.

Extent.—Sixty feet by thirty-five feet.

Ornamentation.—None.

Description.—Built of granite. Base of walls, five feet; width of present tops, three feet six inches; present height, four feet. Five very small inclosures. Signs of courtyard outside. The entrance, which has rounded walls, is on the north-west side. No traces of steps. Débris heaps fairly large.

Finds.—Pottery of all periods, gold-dust, copper beads and wire, iron slag, and blow-pipes.

MOLINDULA RUINS

Situation.—About nine miles north-west of the Check Ruins and near Molindula's kraal, on a western tributary of the Bubi River, and on a granite whale-back kopje. The ruins are situated at the top end of a long valley between high granite kopjes, which are thickly populated on the tops. The valley is cultivated from its entrance right up to the ruin.

Period.—First Zimbabwe period. Oval plan, and built to suit contour of the hill. Walls massive, with first-period batter-back inside and outside, and workmanship excellent. Entrance walls rounded.

Importance.—Minor.

Extent.—Fully ninety feet at its longest points and thirty-five feet broad. No signs of former extensions.

Ornamentation.—No ornamentation on walls now standing, but some may be found were the filled-in inclosures to be opened out.

Description.—Built of granite blocks; width of walls at present tops, about four feet; highest portion (south-east side), eleven feet; impossible to measure bases, as inclosures are partially filled in. Five inclosures can be traced, but owing to filling-in the divisional walls, which are usually lower than the main walls, are only just visible. Other inclosures may exist. The only entrance is on the north-east, and this has buttresses which are rounded. Two steps still remain at the entrance, and possibly others may be found. Débris heaps extend on the south-east and north-east sides of the slopes of the hill.

Note.—Some amateur explorers have damaged a portion of the outer walls.

Finds.—Fine gold-dust, ancient and later pottery, some glazed.

RUINS (UNNAMED)

Situation.—On a low granite kopje, in a densely populated district, about eight miles south-east from Messrs. Weir and Edwards's store, M'Pateni. The ruins are surrounded by native gardens and are best approached from the north-west.

Period.—First Zimbabwe period. Plan elliptical; foundations on rock. Main walls batter-back inside and outside, and good workmanship. Rounded entrance walls.

Importance.—Minor.

Extent.—Thirty feet by twenty-five feet.

Ornamentation.—Herring-bone pattern on the inside wall of one of the small inclosures. The pattern faces the east and is three courses above the original floor.

Description.—Present height of walls, five feet; width at base, five feet; at top, three feet. There are two small inclosures. The portion of the inclosure open on the east side was probably a portion of the courtyard. The entrance is on the west side.

Finds.—Period doubtful. Skeletal remains close up against the wall immediately under the herring-bone pattern, with gold pellets hammered preparatory to being made into beads, iron bangles overlaid at intervals with gold bands, copper bangles and beads.

RUINS (UNNAMED)

Situation.—About one mile north-east of Messrs. Weir and Edwards's trading store, M'Pateni, at the south side of the M'Pateni Range and on a low granite rise near a tributary of the Bubi River. The country is very hilly. The best approach is from the south-west.

Period.—First Zimbabwe period. Elliptical plan of building, and for its size is correspondingly massive. Usual batter-back inside and outside of main wall, with excellent workmanship, and walls are on formation rock.

Importance.—Minor. No traces of temple remains or of gold-smelting operations so far discovered.

Extent.—Fifty feet by forty-five feet.

Ornamentation.—Herring-bone pattern ten feet to twelve feet in length on the right-hand side of the only entrance, and faces west.

Description.—Built of granite on the granite formation. Width of walls at bases, six feet; at present tops four feet; height of wall still standing, six feet. There are two inclosures, and these have not been filled in. The entrance is on the west side. The building is open on the north-west side.

Finds.—Gold-dust and pottery of the first period.

RUINS (UNNAMED)

Situation.—Three miles south of Messrs. Beckman Bros.' model farm in the M'Pateni district, on a prominent and isolated granite kopje, somewhat similar to the kopje on which the Umnukwana Ruins stand. These ruins command an extensive view of the surrounding country.

Period.—First Zimbabwe period. Plan of building elliptical; walls massive; first-period batter-back, with good workmanship on both sides of main wall; foundations on bed-rock, and the entrance walls are rounded. Additions of second period at the southern portion of the building.

Importance.—So far no traces of gold-smelting furnaces or of temple remains have been discovered.

Extent.—The ruins cover an area of one hundred and fifty feet by forty feet.

Ornamentation.—Check pattern on the north-west portion of inner inclosure wall, and about three feet above the present surface. Length of pattern about fourteen feet.

Description.—Built of granite blocks. Width of bases of walls, seven feet; at present tops four feet; highest portion now standing, six feet. The only entrance is on the north-east, and

has rounded walls. There are three partial inclosures visible. The approach to this building is extremely difficult owing to the steepness of the hill. There are no steps visible. Débris heaps are on the north-east and south sides of the hill, and are extensive.

Finds.—Zimbabwe period. A few gold beads, gold dust, and pottery. *Later periods.* Pottery.

BURANGWE RUINS

Situation.—Two miles north of Lone Spitz Kop, which is also called Burangwe Kopje. The Induna of the district—Impendele—lives near the ruins. The best approach is from the north-east.

Period.—First Zimbabwe period. Walls fairly massive, with usual batter-back, on circular plan, walls on bed-rock; workmanship excellent.

Extent.—These ruins cover an area of about fifty feet in diameter.

Importance.—These ruins were used by the ancients as a gold-smelting centre.

Ornamentation.—None.

Description.—Highest portion of walls still standing, twenty feet; width of top, two feet six inches; width of bases cannot be stated owing to filling up during a later period. The building does not appear to have been divided into inclosures. Two entrances on the west side, the one with rounded walls, the other with squared walls.

Finds.—Gold crucibles, fine gold portions of torn and worn gold bangles, amber beads, smelted copper, and copper beads.

IHURZI RUINS

Situation.—On a low granite kopje four miles north-west of Banlae River, Belingwe. The Induna of the district is M'Saltele. The ruins command an extensive view of the surrounding country. The best approach is from the west.

Period.—First Zimbabwe period. Elliptical plan; walls fairly massive; batter-back on inside; both sides of main walls show equally good workmanship; foundations on bed-rock.

Importance.—Minor.

Extent.—Diameter about fifty feet.

Ornamentation.—Herring-bone, facing from south-west to west-north-west.

Description.—Highest portion of walls about eight feet; width of present walls, three feet. Entrance faces the west and is rounded on the outside and squared on the inside. There are no inclosures.

Finds.—Fine gold, copper, and pottery.

SESINGA RUINS

Situation.—Two miles south of Watoba Ruins, in the Belingwe district, on a rough granite kopje commanding an extensive view of the surrounding country. The best approach is from the north-east.

Period.—First Zimbabwe period. Elliptical plan; batter-back and good workmanship on both sides of main walls; foundations on bed-rock.

Importance.—Gold-smelting centre.

Extent.—Diameter about forty feet.

Ornamentation.—None.

Description.—Highest portion of the walls eight feet high, and width of present tops about two feet. The entrance is on the north-east side of the ruins, and is thirty inches wide.

Finds.—Gold fragments and fine gold, ancient gold crucibles, and pottery of all classes of manufacture.

Note.—There are several other ruins of the first period of Zimbabwe architecture in this district, particulars of the locations and outlined descriptions of which the authors are now engaged in securing.

CHAPTER XVI

RUINS IN EAST BELINGWE

MUNDIE RUINS

Situation.

ON a range of prominent kopjes three miles west of Mundie River and twenty-five miles west of Bochwa Mountain, in the Belingwe district. Immediately facing the range on which the ruins are erected, and within the distance of a mile, are very extensive ancient iron-workings, which continue for a length of twenty miles, which workings have been mined at different periods, but undoubtedly by the ancients (see Chapter xii., section *Tools*).

Period.—All the four ruins which form the group of the Mundie Ruins are of the first Zimbabwe period architecture. This is shown by the massive character of the walls, which have the same batter as the oldest portion of the Great Zimbabwe, and are built with the same excellent workmanship, both inside and outside of the walls being equally as well and elaborately built. The walls of the entrances are rounded. Straight and almost plumb walls, angular corners, and rising-terrace plan of building are altogether absent. The drain through the base of the north-east wall of No. 2 Ruin is exactly similar to the drain through the north-east wall in the oldest part of the Great Zimbabwe. This drain has only so far been found at Zimbabwe and Mundie.

Importance.—The ruins are of major importance, and were undoubtedly the gold-smelting centre for this particular

district. Ruins Nos. 2 and 3 are the largest and apparently the most important ruins of this group. The following ruins, among several others, are of minor importance and were evidently dependent ruins in this district: Essengwe, Esbewa, Bochwa, etc.

Extent.—This group of four ruins (Nos. 1, 2, 3, and 4) covers a line of a quarter of a mile.

Construction.—The ruins are built on the granite formation and of granite blocks of the usual Zimbabwe shape. Nos. 2, 3, and 4 Ruins are built on the ordinary level of the range, but No. 1 Ruin is built on a high Spitzkop-shaped peak to the north of the other ruins, and commands the view of all the ruins, and also as far as the Bochwa Ruins twenty-five miles distant. The walls, which are built on circular and oval plans, are about seven feet in width at their bases and four feet in width on their present tops.

Ornamentation.—The only Zimbabwe pattern in these ruins is check pattern, and this is to be found on an inner divisional wall on the right-hand side of the north-east entrance of No. 3 Ruin.

Description.—No. 1 Ruin. These ruins are built, as already stated, on a peak to the north of the other ruins forming this group, and crown the heights, and are built to suit the contour of the summit. They are erected in circular form and have a diameter not exceeding twenty feet. The main entrance is on the north side and has rounded walls. The approach to this ruin is up a particularly precipitous path leading among boulders. This ruin is divided by walls into three very small compartments. The highest portion of wall now standing is about four feet. This ruin has not been reoccupied, and the original floor is still the present floor. It is probable that this building only served as a look-out or signal station. There have been no finds of any importance in this ruin.

No. 2 Ruin. This is a double ruin, A and B. A Ruin is

circular in form and is about eighteen feet in diameter. The entrance faces to the north-west. B Ruin is oval in form and is attached to the south side of A Ruin. The entrance faces the west. Extending from B Ruin, at about one hundred feet distant on the south side, a semicircular wall runs towards the north and north-west for a distance of two hundred feet, the wall averaging four feet in height. The space between the Ruins A and B and within the inside inclosing wall, has been floored with cement. Within A and B Ruins and the outer inclosure wall two hundred and eight ounces of pure gold ornaments have been discovered. In A Ruin the skeletal remains of an ancient were discovered with seventy-two ounces interred with him. Gold was found scattered about the floor most promiscuously in these two ruins and within the inclosure. This was in all stages of manufacture. There were many gold-wire bangles pulled altogether out of shape as if torn or snatched at by violent hands, and scattered beads and charred remains of unburied people evidencing a fight and a defeat of the ancient occupiers. This patent evidence of strife applies also to Ruins Nos. 3 and 4.

No. 3 Ruin. This is built upon a low granite kopje, and is by far the most important ruin in this group and occupies the central position. The walls are built upon a circular plan and the diameter is about one hundred and sixty feet, the highest portion of the walls now standing being about fourteen feet. The main entrance is on the north side and has rounded walls. The peculiarity of this entrance is that while it extends only ten feet towards the interior of the building it widens out from three feet six inches at the outside to twelve feet at the inside end. The floor of this entrance is paved with long slabs cemented over. On the south side there is another entrance which goes straight into the building for six feet, when it takes a sharp turn towards the left.

This ruin is divided by walls into eight different inclosures, which are built up against the inside of the whole length of the main walls, leaving a large open court in the centre. In this court and on the south-west side were discovered five gold-smelting furnaces of the ancients. These are described in Chapter iv. as being five basin-like holes sunk into the cemented floors in two rows, one of three and the other of two holes, each being distant three feet from the others. The holes are twelve inches in diameter and twelve inches deep in the centre. Each of these holes has several layers of coatings made of granite-powder cement, and each layer is thickly studded with gold.

Débris heaps containing gold crucibles and portions of blow-pipes extend from the west side round the south to the east side.

Outside the south entrance are signs of conflict; torn gold-wire bangles, scattered beads, and skeletal remains unburied apparently lying in the position in which the ancients had been slain.

No. 4 Ruin. This is distant about seventy feet to the south of the central ruin, No. 3, but is smaller. It is divided into five separate inclosures. More gold-dust has been found in the soil inside this ruin than in any of the other ruins of this group.

General notes.—The spaces between these four ruins are covered over with portions of old walls, and these are so numerous and run in so many directions that it is impossible to prepare any plan of them.

On the west side of the ruin is a perennial stream running in the creek below, and from this stream it is possible to wash for small gold beads, which have evidently been lost from time to time when the ancients came for water, as they must have done during many centuries.

The most interesting points concerning this group of ruins are—

(1) The signs of the ancient's conflict and defeat.

(2) The finding of ancient gold crucibles with the cakes of gold unremoved.

(3) The discovery of five complete ancient gold-smelting furnaces.

(4) The drain on the north-east side of No. 2 Ruin, which is identical with the drain at Zimbabwe, and so far has not been found in other ruins.

Finds.—Zimbabwe period. Total amount of ancient gold ornaments discovered in these ruins was two hundred and thirty ounces. These included gold bangles weighing up to six ounces each. One large gold bead weighed exactly one ounce, and had chevron pattern all round. Another smaller bead weighed half an ounce and had trellis-pattern stamped all round. The other gold beads ranged in all sizes from less than a pin's head to that of an ordinary pea. Beaten gold and gold nails. Portions of iron bangles overlaid at intervals with gold bands. Large quantities of gold pellets spilt from crucibles, these being found in the ruins and in the débris heaps outside. Cakes of gold found in the crucibles. Cakes of gold near the waist of most skeletons as if carried in a pouch on a belt (see Chapter viii.).

NUANETSI RUINS

Situation.—On rising ground four hundred yards from the west bank of Nuanetsi River, Belingwe district, three from where river breaks through the M'Pateni range of hills, and half a mile from Gouche's trading road.

Period.—First Zimbabwe period. Massive character of walls, with first-period batter-back. Elliptical plan of building.

Importance.—Minor importance. No signs of gold-smelting having been carried on.

Ornamentation.—Profusely decorated with check pattern on north-east front wall.

Extent.—Sixty-five feet by fifty feet. Evidently was, or intended to be of larger extent.

Description.—Built of granite on the granite formation. Highest portion of walls now standing about six feet, width of tops of present walls four feet, width of bases impossible to ascertain, owing to formation rock being covered with soil and there having been no exploration work done here. There are three inclosures and a courtyard. The south-west portion of the building is open and without natural protection. All traces of main entrance have disappeared.

Finds.—Zimbabwe periods. Ancient pottery and gold-dust in soil.

Monomotapa or later periods. Copper beads and pottery.

LITTLE NUANETSI RUINS

Situation.—On a high and semi-detached kopje three miles up east bank of Nuanesti River, just where the river breaks through the M'Pateni Range, and about three miles east of Gouche's trading road and twenty-five miles north-east of Umnukwana Ruins.

Period.—First Zimbabwe period. Elliptical plan of building, walls massive with first-period batter-back, excellent workmanship outside and inside, rounded entrance walls.

Importance.—Minor importance. No evidences of gold-smelting operations, but no exploration work done.

Ornamentation.—None in walls still standing.

Extent.—Forty feet by thirty-five feet.

Description.—Built of granite on granite formation. Highest portion of walls now standing seven feet, bases five feet wide, present tops three feet six inches wide. There are four inclosures, two of which have been partially filled in by later occupiers. Two small inclosures are without cemented floor, the formation rock being bare. The main entrance is on the south-east side.

Finds.—None.

BOCHWA RUINS

Situation.—These ruins are situated on the southern slope of Bochwa Mountains, in the Belingwe district, at their highest point, not on the range itself, but on a granite kopje, which is very thickly wooded round the base. A strong running stream from the top of the Bochwa Peak passes within two hundred yards of the west side of the ruins. The land about here is the finest agricultural ground in Rhodesia, and, with existing irrigation facilities, is admirably adapted for sugar farms. The ruins can be approached from all sides, but the entrance is on the south-east of the building, on which side is the easiest ascent. These ruins are in the locality of the ancient iron-workings mentioned in the description of Mundie Ruins.

Period.—First Zimbabwe period, with additions of second period. Elliptical plan of building, walls fairly massive, rounded entrances, excellent workmanship on outside and inside of main walls, foundations on formation rock.

Importance.—This was an important centre of the iron industry of the ancients. Pannings from débris heaps gave fine gold.

Extent.—About sixty feet by thirty feet. No signs of the buildings having been of larger extent.

Ornamentation.—Check pattern on the east side of a wall which runs about ten feet distant in front of the entrance. The pattern extends almost the whole length of this wall and is five feet above the present level of the ground.

Description.—The walls at bases are five feet wide, present reduced height being fourteen feet, with width at top of three feet six inches, and are constructed of granite blocks upon the granite formation. There are three inclosures, and in one of them is a circular wall with a diameter of eight feet, similar to the one in the M'Telegwa Ruins, but of superior workmanship. The internal walls of the ruin and main walls

entirely surround this circular building, leaving a passage two feet wide all round it. Probably the circular building, like the one at M'Telegwa, will be found to contain the remains of a chief of the Monomotapa period. The entrance is on the south-east side, and has rounded walls. No traces of any steps were discovered. An entirely separate wall fifteen feet long extends in front of the entrance at a distance of ten feet from it.

Notes.—With the exception of the Tuli Ruins, no other ruins so far discovered have a detached wall running at an angle across the front of the main entrance.

No exploration work has been done at these ruins.

Finds.—Fine gold, pottery of oldest material, design, and construction, gold- and iron-smelting blow-pipes, and portions of iron-smelting furnaces.

LITTLE BOCHWA RUINS

Situation.—Three miles south-east of the Bochwa Ruins and about three miles from the Bochwa Range, on low ground with a kopje on the south-east side, up to the base of which the foundations extend.

Period.—First Zimbabwe period. Elliptical plan of building, bases of walls at least four feet wide, workmanship excellent.

Importance.—Possibly intended for a protecting fort of mining district.

Extent.—Diameter about thirty feet. No traces of foundations having once extended further.

Ornamentation.—None.

Description.—This ruin gives evidences of incompletion, as no building material can be seen near it, and the walls, which are only two feet above the foundations, are level and clean. Probably, after commencing to build this ruin, the ancients decided to desist, as either the iron-workings in the immediate locality were either not thought of sufficient value, or some

other adjoining district attracted their attention. There are no signs of occupation. No exploration work was attempted at these ruins.

ESSENGWE RUINS

Situation.—About nine miles S.S.E. of Mundie Ruins, on a long and prominent granite bluff protruding eastwards from the Essengwe Mountains, in the Belingwe district. In close proximity and on a bluff fully three hundred feet higher is another ruin—the Little Essengwe Ruins—overlooking the Essengwe Ruins. These ruins can only be approached on the eastern side. The country here is very pretty, and the ruins command extensive views as far as the Bochwa Mountains, the Mundie Ruins, and a great portion of the M'Tibi district, which contains a large number of ancient ruins.

The springs in the old creeks round these ruins have become dried up, but between these ruins and the Little Essengwe Ruins is a hollow in the hills, from which the ancients have removed large quantities of the decomposed portions of the granite for making cement for flooring and also for making the bed for the original floors. This excavation forms a reservoir sufficiently large to contain a considerable quantity of water for at least seven months in the year. The rainfalls from other parts of the hill converge on this hollow.

Period.—First Zimbabwe period. The walls are fairly massive, and are built on oval plan to suit the contour of the bluff, and have round ends, batter-back, and excellent workmanship on both sides. The terraced and angular styles of architecture are altogether absent.

Importance.—This was a gold-smelting centre of the ancients, and the ruins are larger than the main ruin at Mundie. There are numerous dependent ruins of minor

importance in this district, and probably more may yet be discovered.

Extent.—Two hundred feet by thirty-five feet.

Ornamentation.—None in walls now standing.

Description.—Built of granite on the granite formation. Walls five feet wide at bases, nine feet high, and three feet six inches wide at present reduced tops. The main entrance is on the east side facing the ascent. The north wall is erected right on the edge of the precipice. The interior contains one courtyard and nine inclosures. The ruins are in a fairly good state of preservation. This may be accounted for by their elevated position, no soil for trees being able to silt into them. About three hundred feet from the front of the entrance and at the foot of the ascent are the ruins of two small buildings (twelve feet by ten feet) evidently guarding the approach.

Notes.—Though these buildings have been reoccupied, the interiors have not been filled in.

Finds.—Ancient gold crucibles, gold beads, gold tacks, beaten gold, portions of gold wirework. Débris heaps contain portions of almost every description of pottery.

LITTLE ESSENGWE RUINS

Situation.—Three hundred feet higher and three hundred yards to the north of the Essengwe Ruins and on the extreme summit of the Essengwe Range.

Description.—Elliptical plan of building, fifty feet by thirty-five feet. Present walls six feet six inches high. Main entrance faces the north-east. Ends of walls are believed to have been rounded. Protected on open side by steep precipice of some hundreds of feet to level of the country. Numerous signs of reoccupation. There is no ornamentation.

Finds.—Gold beads and manufactured gold, gold-dust, but no ancient gold crucibles.

ESCEPWE RUINS

Situation.—Seventeen miles south of the Mundie Ruins and about fourteen miles north of M'Tibi's stronghold on the Escepwe Range, in the Belingwe district. The ruins occupy a commanding position on a high and prominent kopje, and have an extensive view over the surrounding country, which is thickly wooded and where game of all sorts is plentiful. There are no native kraals in the immediate vicinity. When Messrs. Neal and Johnson were engaged in exploring these ruins the natives came fourteen miles to trade, with their grain, honey, and native beer. These ruins are two hundred yards west of the road which was first opened up when the chief M'Pefu and his people fled from the Transvaal during the last Kaffir war of the Boers.

Period.—First Zimbabwe period. The walls are of massive character, and are exceedingly well built both inside and outside, with the first-period batter-back on the outer and inner faces. The plan of building is elliptical, even the divisional walls being in curves, while the foundations are on bed-rock. The entrance has rounded walls. The buildings have also been occupied at later periods.

Importance.—Fairly important. Gold- and copper-smelting were carried on here by the ancients.

Extent.—The greatest length of this ruin is fully two hundred feet and thirty-five feet at its widest points.

Ornamentation.—Check pattern on the outside of the south-west portion of the main wall on the right-hand side of the entrance, and runs in two courses for about twenty feet or more.

Description.—This ruin is built of granite on the granite formation. The highest portion of the wall now standing is about seven feet, the width of the bases five feet, and of present tops three feet six inches. There is only one entrance to the building, and that is on the south-west side, and is two

feet six inches in width, with rounded walls. The entrance is in a splendid state of preservation. There are five different inclosures, the courtyard being unusually large, occupying more than one-half of the entire building. Though there are unmistakable signs of reoccupations, the inclosures have not been filled in.

Notes.—Water is very scarce in the vicinity of these ruins, the nearest being two miles away.

Iron-smelting has been carried on at these ruins from earliest times to almost the present date.

The ruins have been fairly well explored.

Finds.—Many ancient gold crucibles, gold beads with Zimbabwe pattern, gold bangles, etc., copper crucibles in large numbers, copper beads, bangles, and later pottery.

LITTLE ESCEPWE RUINS

These are ruins of minor importance, and are situated about one hundred and fifty yards from the Escepwe Ruins on the highest point of the Escepwe Range. It is difficult to decide as to the period; the workmanship is poor, and the stones irregular in size, but not piled up as in the Abolosi forts. Present walls two feet in height, diameter thirty feet, elliptical plan, and cemented floor throughout. There are large quantities of iron slag and iron-smelting blow-pipes, but no traces of gold.

RUINS (UNNAMED)

Situation.—Nine miles east of the Essengwe Hills, in the Belingwe district, on a rugged range of granite kopjes and about ten miles west of the Victoria-Tuli Road at twenty miles from Lundi Drift.

Period.—Every evidence of having been built in the first Zimbabwe period.

Importance.—Of minor importance; evidently one of the

road-protecting forts or stations on the ancient Matoppa-Zimbabwe and Sofala main trading route.

Extent.—Diameter about sixteen feet.

Ornamentation.—Herring-bone pattern, three feet long on the north-east side of inside wall.

Description.—Present height of walls four feet, width at bases five feet, at present tops three feet six inches, with commencement of usual first-period batter-back; workmanship on face of inside and outside of main walls most excellent. There are two small inclosures. Entrance faces the south-west. The building has been partially filled in by reoccupiers.

Note.—No finds have been secured, as no exploration has been done, but there are traces of gold-dust in the soil which was possibly lost from bulk in transit.

RUINS (UNNAMED)

Situation.—About midway between the Bochwa Range and the Mundie group of ruins, in the Belingwe district, close to a tributary of the Mundie River, and built on a low, oval-shaped granite kopje.

Period.—First Zimbabwe period.

Importance.—Minor.

Extent.—Diameter about fifty feet.

Ornamentation.—None in walls now standing.

Description.—Built of granite on the granite formation. Height of walls, which are massive, five feet; elliptical plan of building, good workmanship outside and inside of main wall, with usual first-period batter-back. Ruin partially filled in by later occupiers.

Notes.—There are evidences of great conflagration having taken place within this ruin.

No exploration work has been done here, but it is believed, judging by certain indications, that labour would be rewarded by "finds."

CHAPTER XVII

RUINS IN NORTH BELINGWE

M'POPOTI RUINS

Situation.

THESE ruins are four miles to the north of the Ingesi River, and are at the outside of the valley leading to the M'Popoti Range, in North Belingwe. The kopje on which the ruins are situated is fairly wooded, and stands about three hundred feet above the level of the surrounding country. The ruins command an extensive view. The best approach is from the Nellie and Pioneer Mine, or past Mudnezero Ruins on Darling's trading route. The best ascent of the kopje is from the west.

Period.—The ruins would appear to belong to the first Zimbabwe period, the plan being elliptical, the batter-back of walls the same as in first-period buildings; the foundations, so far as they can be observed, are on bed-rock, and the workmanship shown on both inside and outside of walls equal that of any other ruins yet discovered. The entrances, however, have squared walls. The ruins have been partially filled in during later periods.

Importance.—These ruins are of major importance, and probably were the centre for this portion of the Belingwe district. From the number of broken gold crucibles with gold still in the flux, and the quantity of fine gold and gold ornaments discovered, it is known that an extensive gold-smelting industry was carried on here by the ancients. No temple remains have been discovered.

Extent.—The area covered by the ruins is about one hundred and sixty feet by one hundred feet, but lower down on the west side of the kopje, at a distance of about fifty yards, are signs of further buildings having been erected as if to serve for a first line of defence.

Ornamentation.—Check and herring-bone patterns are about nine feet from the present surface on the outside of the west wall facing the Gwabi Range. The herring-bone pattern is made of ironstone slate. Probably there was further ornamentation in the higher portions of the wall which have fallen down.

Description.—Built of granite blocks on the granite formation. The walls are massive, having bases of about eight feet. The highest portions of the wall now standing are from ten feet to twelve feet high and have a width at the tops of three feet. The large amount of stone débris lying about points to the walls having once been much higher. There are three entrances, the main entrance being on the west side, two inclosures, and a courtyard. Portions of the south-west inclosure and north-east inclosure have been filled in at later periods. There are remains of a flight of steps leading up from the main entrance.

Finds.—Charred remains of skeletons with the usual gold ornaments, also gold beads, fine gold-dust, portions of ancient gold crucibles, and pottery of the best Zimbabwe designs, material, and workmanship. Copper wire.

[The above is extracted from the diary of Messrs. J. Campbell and F. Leech, who co-operated for nine months with Messrs. Neal and Johnson in the exploration of several ruins.]

LITTLE M'POPOTI RUINS

Situation.—On a granite bluff two and a half miles north-east of M'Popoti Ruins.

Period.—First Zimbabwe period. The tops of the original

walls are castellated as at N'Natali, evidently the work of a much later period, possibly that of the Portuguese. The building is laid upon an elliptical plan, the walls are very massive with first-period batter-back and good workmanship inside as well as outside, the entrance walls are rounded, and the foundations are on bed-rock.

Importance.—Minor importance.

Extent.—Seventy feet by sixty feet.

Description.—The bases of the walls where visible are twelve feet wide, the portion still standing being fifteen feet in height. The main entrance faces the north-east. A boulder forms the left-hand side of the entrance, while a rounded wall forms the right-hand side. The width of the entrance on the outside is about five feet, converging to three feet on the inside. There are no inclosures in this ruin. The ruin is naturally protected by huge boulders which have been utilised in the construction of the building. The back of the ruin is formed by a precipitous kopje, towards which the main walls curve at each end. The natives have used these ruins as a stronghold against the raids of the Matabele. Débris heaps exist, but there have been no finds, as no exploration work has been done.

[The above is extracted from the diary of Messrs. Campbell and Leech.]

WEDZA, OR BADEN-POWELL RUINS

Situation.—South-east of Wedza Mountains, in the Sabi valley, near Mount Ingona and Ummasunda's kraal, in the Belingwe district.

Period.—Believed to be first Zimbabwe period building. Oval-shaped plan, walls on rock foundation, excellent workmanship.

Importance.—Minor. Probably a road-protecting fort.

Ornamentation.—A long length of herring-bone pattern

near present tops of outside wall, with two rows of check pattern immediately below it.

Description.—Walls about seven feet high, and where not pulled down intentionally are in a wonderfully good state of preservation.

M'WELE RUINS

Situation.—Three miles south-west of the Belingwe Peak, on the west bank of the M'Wele River, in the Belingwe district. These ruins are on the summit of a long rise and overlook the surrounding country, while they are almost hid by trees. It is approachable from almost any point.

Period.—First Zimbabwe period. The walls are very massive in comparison with the size of the building, and are built on an elliptical plan, with the usual first-period batter-back of both inside and outside main wall, and of good workmanship, with the foundation on formation rock. There are no extensions of a later date, but partial filling in during a subsequent period.

Importance.—These ruins do not appear to have been a gold-smelting centre of the ancients, but probably were an important road-protecting fort guarding an ancient road leading from the main gold mines of Belingwe towards the Sabi River.

Extent.—Diameter about seventy feet.

Ornamentation.—Herring-bone pattern both inside and outside of the north-west wall, each pattern being about five feet in length and four feet from present top of wall.

Description.—Built of granite on the granite formation. Width of walls at bases at least five feet, and three feet at present tops, and are nine feet high at highest points. There are three inclosures, also the usual courtyard. The entrance is on the west side.

Note.—No exploration work has been done here.

M'WELE TRIBUTARY RUINS

Situation.—These ruins are about twelve miles in a south-easterly direction from the Belingwe Peak, in a patch of wooded country and on the north bank of the M'Wele River, on a steep and rocky granite kopje directly overlooking the bed of the river. The best approach to these ruins is from the north side.

Period.—First Zimbabwe period. Plan elliptical, walls fairly massive, usual first-period batter-back, workmanship exceptionally good with true courses, and main walls on rock foundation.

Importance.—Minor importance. No traces of gold-smelting operations. Probably a road-protecting fort.

Extent.—Diameter forty-five feet.

Ornamentation.—Check pattern on outside of south main wall, extending almost the whole distance of the wall immediately overlooking the river.

Description.—The width of the walls and the number of the inclosures cannot be ascertained on account of the building having been filled in and cemented over during a late period. Height of present reduced wall twelve feet, and twenty-five feet above the level of the river. The platform is approached from the north side of the ruin. The entrance is covered in and is indistinguishable. There are no traces of steps. The platform shows the remains of a clay building of, perhaps, Monomotapa date.

Note.—There have been no finds, as no exploration work has been done. No débris heaps were noticed, and their absence is accounted for by the débris having been thrown directly into the stream which runs under the foot of the main wall, and so carried away.

CHAPTER XVIII

RUINS IN FILABUSI DISTRICT

WHEEL OF FORTUNE RUINS

Situation.

THESE ruins are three hundred yards to the west of Edkin's Road, at about nine miles north of Insiza Drift at Filabusi, and on the west bank of the river. They are close to the Wheel of Fortune block of ancient workings, are located on a whale-back granite kopje, and command an extensive view of the surrounding country, including the Nelly Reef, Bala-bala Peak, Filabusi Peak, and to a considerable distance towards the south. Access to these ruins can be obtained either at the east or west side of the kopje. Ancient workings are exceedingly numerous in this district.

Period.—These ruins are of both the first and second Zimbabwe periods, with extensions of later periods.

Importance.—These are important ruins, both on account of their position and size. Gold-smelting operations were very extensively carried on here by the ancients. Large and numerous débris heaps contain quantities of gold pellets and portions of gold crucibles with gold showing in the flux. Furnaces must have existed here, and these will, in all probability, be found on the original floors when opened out. The ruins were the centre of a district literally covered with ancient gold-workings.

Extent.—These ruins cover an area of more than an acre.

Ornamentation.—There is no ornamentation in the walls now standing.

Construction.—These ruins are built of granite on the granite formation. The respective peculiarities of the architecture of the first two periods are very clearly defined. Some sets of these buildings are entirely of the first period, the other sets are of the second period. The peculiarity of the second-period architecture in these ruins is that there is no rising terrace plan of walls, as the contour of the kopje precludes its adoption. In the second-period diorite blocks, brought from some considerable distance, have been introduced in the masonry.

General description.—This series of groups of ruins consists of thirteen entirely separate buildings. The highest portion of the walls still standing is about six feet. Each ruin is divided into from three to five inclosures, each ruin having the usual large courtyard inclosure in addition to the smaller inclosures. The inclosures vary in dimensions, these appearing to have been regulated by the size of the entire building.

The most important ruin of this group is that which occupies the summit of the whale-back. This commands a good view of all the other ruins, and is of the first-period architecture. The north side of the wall has fallen down the steep side of the kopje. The width of the main walls is four feet six inches at the base and two feet six inches at the present top.

The filling-in process is noticed in the main ruin more than in the other ruins, though each of these has one or more of their inclosures filled in. At the main ruin the cemented floor over the filled-in portion is in good preservation, and upon it are the foundations of buildings of a later period, similar to those seen at Khami and Dhlo-dhlo, and as at these two ruins, there are here abundant evidences of a great conflagration having taken place on the later floors.

Two inclosures were opened out to below the original floors, but no discoveries of any note were made, except of gold-dust and pellets of gold, and pottery of various periods. No skeletal remains were found. Each ruin has a large débris heap.

Finds.—Zimbabwe periods. Gold beads of the earliest periods, portions of gold bangles, beaten gold and tacks, and pellets of gold, these last being found in the greatest proportion. A great quantity of gold crucibles with gold in flux. The oldest style in ancient pottery.

Monomotapa period. Copper bangles, solid and made of twisted wire, lumps of copper, copper crucibles, arrow and spear heads, and pottery of coarse manufacture, with crude imitation of Zimbabwe patterns.

Portuguese period. Glass beads and glazed pottery.

EVANS' STORE RUINS

Situation.—Five hundred yards north of Evans' store, Umzingwani Drift, on the Bulawayo-Filabusi road. Situated on summit of kopje, occupying strongly strategic position, overlooking the river and commanding most extensive view of Matoppa Hills, Gwanda Kopjes, Sable Kopje, and Balabala Peak.

Period.—One of the Zimbabwe periods, probably the first.

Ornamentation.—None visible.

Importance.—Its size is small, but its strategic position suggests that it was both a road-protecting fort and a base for the workers on the very numerous ancient workings in the locality.

Extent.—About fifty feet by thirty feet.

Description.—Built of diorite slate on diorite formation. South-west wall is down, the other walls being from four to six feet high from the outside level, width of bases about five feet, and width of present top three feet. Such portions

of the inside of main wall still visible show good workmanship. A small natural platform of bare rock on the north-west side was apparently once walled round except on the side where the rock drops precipitously. The inside appears to have been, at a late period, deliberately filled in with soil to a depth of four feet; as it could not have silted here, and trees are now growing in the soil within the ruin.

Finds.—Almost covered with earth was a comparatively modern iron-smelting furnace made of clay, with iron slag and pieces of iron-ore rock. This furnace is similar to the furnaces used at present by the Barotsi. At two feet from the surface a thick strata of ashes, with pieces of charcoal, was struck, and at three feet from the surface were found, under the roots of a well-grown tree, human bones, but no skull; the bones were in parts blued from contact with plain copper bangles which were found with them. Copper wire, copper-wire bangles mostly broken, and finer than are now made by any native tribes; also greenish-blue glass beads; also fragments of pottery with imitation of Zimbabwe patterns; also thin brown polished pottery engraved with stylo before baking, in pattern of a band of close dots; these latter, judging by the segments, were portions of bowls the size of a large coffee-cup.

DEFIANCE RUINS

Situation.—These ruins are one and a half miles east of the Defiance Mine and are on the east bank of the Ingangase River, in the Filabusi district, and are built on a well-wooded diorite kopje. To approach the ruins one takes the main road from the Filabusi Camp past the Killarney and Defiance Mines leading to Fort M'Pateni, and immediately after crossing the drift over the Ingangase follows a footpath, turning off to the left for about half a mile; this path passes the ruins on the south side at one hundred yards' distance.

Period.—First Zimbabwe period. Elliptical plan of building, massive character, foundations on rock formation; oldest and batter-back on inside and outside of wall; main and divisional entrances rounded; good workmanship on inner and outer faces of walls.

Importance.—Major importance. Gold-smelting operations were carried on here by the ancients. The ruins were evidently the protecting fort for the great number of extensive ancient gold-workings that are to be found in this district. The population could not have been extensive as débris heaps are comparatively small.

Ornamentation.—None in walls now standing.

Extent.—The ruins have a diameter of sixty feet. There is no evidence that they once covered a larger area.

Description.—These ruins are built on the diorite formation and of diorite blocks. The height of walls is seven feet, width at base five feet, and width at present tops three feet six inches. There are five inclosures averaging in area about twelve feet by ten feet, the divisional walls being of excellent workmanship, and have rounded ends. There are two entrances; the one from the north-east side, which is three feet six inches wide, leads straight though two inclosures to the south-west entrance, outside which entrance and down the side of the kopje are the débris heaps. No traces of any steps were found. The floors are of burnt clay mixed with gravel, evidently obtained from the river close by. The layer under the floor is made of water-worn quartz, granite, and other rock pebbles.

Finds.—Zimbabwe periods. A small number of gold beads, tacks, beaten gold, gold-wire bangles, portions of gold crucibles, gold pellets, and gold-dust.

Soapstone slab for playing the Isafuba game (these game-stones were used by ancients, also by people of Monomotapa period, and are now used by present native tribes, and are described in Chapter vi.). This stone is now in the

possession of the Rhodesia Scientific Association at Bulawayo.

Monomotapa period. Skeletal remains were dug up here, but only copper ornaments were found with them. The dry-crusher produced a few small pellets of smelted gold from the débris of the graves.

RUINS (UNNAMED)

Situation.—In fairly wooded country on the summit of a most prominent and isolated granite kopje at least three hundred feet high, four and three-quarter miles north of the Defiance Mine, and on the east bank of Ingangase River.

Period.—First Zimbabwe period.

Importance.—Minor.

Extent.—Thirty feet diameter.

Ornamentation.—None.

Description.—These ruins are protected on three sides by a precipitous declivity, in some parts by sudden drops of from twenty to thirty feet. The approach is on the west side up a steep incline over and between large boulders. The plan of building is elliptical. Inside faces of walls are well built. Highest portion of walls still standing twelve feet, width at base five feet, tops two feet six inches, and have first-period batter of walls with rounded ends. The blocks are of granite and rest on the granite formation. There are no divisional walls. Signs of reoccupation during later periods.

Finds.—Zimbabwe period. Portions of ancient pottery. Soil panned traces of fine gold.

Monomotapa or later periods. Copper beads and bangles.

RUINS (UNNAMED)

Situation.—Close to the east bank of Ingangase River, about five and a quarter miles north of the Defiance Mine on a slope running down to the banks of the river.

Period.—First Zimbabwe period.

Importance.—These ruins appear to have been deserted by the ancients before their completion.

Extent.—Diameter sixty feet.

Ornamentation.—None.

Description.—The ruins are built upon an elliptical plan. Width of bases of walls five feet, height of walls five feet. On the east side the walls have disappeared, but the foundation crops out in places.

Finds.—No exploration work has been done here. Some fine gold-dust was found on panning soil on the floors.

INGANGASE RUINS

Situation.—These ruins are on a prominent kopje about four miles north, on the east bank up the Ingangase River from the Defiance Mine, and are near the junction of a small stream which runs into it, in the Filabusi district. The rear or east side of the ruin is naturally protected by an extremely precipitous declivity, on the north side by huge boulders which rise considerably above the ruins and overlook them. The main entrance is on the west side, and the approach is protected by large boulders, among which the path lies.

Period.—These ruins are of first Zimbabwe period architecture and are extremely well built and the courses very true. The plan of building is elliptical. The walls, which are massive, have the oldest Zimbabwe batter on inner and outer faces of the walls, which are equally well built, and have rounded ends. The right-hand inclosure partly filled in during a later period.

Importance.—The massive character of these ruins suggests that these buildings must have been of some considerable importance.

Extent.—The front portion is sixty feet in length, and the area covered is a third of an acre. There are no evidences that at one time they were larger.

Ornamentation.—Herring-bone pattern facing the west on the outer wall for a length approximately of eight feet.

Description.—The walls are built of granite blocks on the granite formation. The front wall is about sixty feet in length. The walls are eight feet wide at bases, and four feet on present tops, and stand fourteen feet high. The main entrance is on the west side. There are no remains of steps. There are two large inclosures, and also a small one in the corner on the west side. The divisional wall does not extend across the whole of the interior, but only for twenty feet, and has an abrupt end, which is now broken down.

At the west extremity of the front wall is a conical buttress, evidently of the same construction and used for the same purposes as the conical buttresses at Lundi, Chum, Umnukwana, and other ruins.

Notes.—Very little exploration work has been done in these ruins except in the right-hand corner of the interior wall, where this had been filled in to a depth of several feet.

Finds.—Zimbabwe periods. Gold-dust in soil. Pottery of oldest Zimbabwe manufacture.

Monomotapa or later periods. Large copper beads as large as ordinary marbles, in the corner of filled-in portion on the upper floor. Pottery of these periods.

BALA-BALA RUINS

Situation.—On the Bulawayo-Filabusi main road, some fifty yards on the south-west side of the road, about four miles north-west of the Bala-bala stores, on a low rise in a hilly country.

Period.—This is believed to have been erected in a late Zimbabwe period. The workmanship is good, considering the material used. The foundations are on rock formation, so far as they are visible. The walls are almost plumb, and the plan of building is elliptical.

Extent.—The ruins occupy an area of about forty feet by thirty feet.

Ornamentation.—There is no pattern of Zimbabwe decoration, but half-way up the outside of the walls is a course of white quartz.

Description.—Owing to dilapidations it is impossible to fix position of entrances. There do not appear to have been any inclosures. The old débris heaps are now hardly traceable. No finds of any importance have been discovered. Pottery of a late period has been found.

CHAPTER XIX

RUINS IN UPPER INSIZA DISTRICT

DHLO-DHLO RUINS

Situation.

IN Upper Insiza, fifteen miles south of Shanghani Store, on the Bulawayo-Gwelo main road, four miles E.N.E. of Captain Rixon's farm and fifty miles east of Bulawayo. The position of the ruins is very romantic, and extensive views of the surrounding country, especially toward the north, are obtainable from the ruins. The north and north-west sides are considered the finest portions of the ruins.

Period.—These ruins, with the exception of what Dr. Schlichter terms "the temple," which is undoubtedly the oldest portion, are believed to have been built in the second Zimbabwe period. Unlike the buildings of the first period, these ruins have some walls built in a comparatively angular form with straight corners. The outside work is much superior to that on the inner walls. The entrance walls are straight and not rounded, and the buildings are erected on the rising-terrace system. Portions have been reconstructed, and there are additions, these showing different later periods of Zimbabwe architecture.

Dr. Schlichter was of opinion that the plan of the temple portion of these ruins was of the earliest form, but he conjectured that the present building was a superstructure on walls of a former period, together with later additions.

Mr. Franklin White, of Bulawayo, whose carefully pre-

pared report* on these ruins is by far the best descriptive account of these ruins yet published, in describing in detail the terraced walls, mentions several peculiarities which would appear to place them in the second period of Zimbabwe architecture, as defined in Chapter xii. For instance, he says: (1) "There are no real foundations to the walls, they just begin on any ground firm enough to carry them; (2) the batter of the walls varies, but is generally slight; (3) some walls are made with two faces, the intervening spaces being filled in with rubble; (4) the courses preserve their thickness fairly well. In some cases a course widens, and in others disappears."

Importance.—From extent, size, architecture, etc., these must have been buildings of major importance, the capital town of the district for all the very numerous smaller ancient buildings that within distances of several miles surround it. Probably the temple also served for the district in which these minor buildings are found, these being without temple remains. Evidences are believed to exist that Dhlo-dhlo was also the gold-smelting centre for the district.

Extent.—The ruins cover about three acres of ground, but there are remains of walls of inferior workmanship beyond this area.

Construction.—The ruins are on the granite formation, and are built with the usual Zimbabwe-shaped granite blocks. In size the ruins are something less than the great Zimbabwe Temple, and are not nearly so massive, while the walls are lower. In a later period, probably the decadent period, granite blocks have, it is believed, been taken from walls and used in erecting smaller buildings of Zimbabwe style, but of very inferior workmanship. Stones from the tops of the walls have also been thrown into the various com-

* *Journal of the Anthropological Institute of Great Britain and Ireland* vol. xxxi., 1901, January to June, p. 21.

DHLO-DHLO RUINS, UPPER INSIZA

partments which have been filled up to the tops of the reduced walls.

Ornamentation.—The ornamentation is far superior to and more interesting than that at Zimbabwe. The principal building is literally covered with astronomical ornamentation, having no less than twenty-three different ornaments of best workmanship still existing. The decorations consist of the herring-bone, chevron, sloping-block, and check patterns, check pattern predominating. A small portion only of chevron is present, but dentelle pattern is absent.

The ornamentations on the terraces are as follows: Lower terrace, check pattern; middle terrace, single sloping-block pattern with check pattern below; highest terrace, single herring-bone at the top and check pattern below.

The north-east wall under the monolith is made up of the following ornamentations: Four rows of stones laid in Zimbabwe style at the top, one row of double herring-bone pattern, and one row of Zimbabwe-laid stones, six rows of check pattern, one row of stones, one row of double herring-bone pattern alternating with check, one row of stones, seven rows of check pattern, with two rows of stones at base of wall. In all cases the herring-bone pattern only extends very limited distances, beginning and ending abruptly.

Orientation.—From an astronomical point of view, Dr. Schlichter pronounces these ruins to be the most interesting ruins south of the Equator. Solar worship, he says, was practised here, also the observation of the principal planets and stars. The walls of the temple form an ellipse.

Central Ruin.—This is a temple fort built on a low granite kopje. The ruin rises in three high terraced tiers towards the summit of the kopje, which it completely covers. The terraces are faced with check and herring-bone patterns, and they terminate abruptly on the north side, where is the main entrance, the walls of which are square-ended.

The length of the inside of the building, according to Dr. Schlichter, is about one hundred and thirty-seven feet, and its width some seventy feet, and the shape is elliptical. Mr. Franklin White makes the total length three hundred and fifty feet and width two hundred and fifty feet, but his are outside measurements. The building contains a monolith on the north-eastern side and a circular inclosure similar to those at Zimbabwe, Khami, and many other ruins. A raised platform with cemented floor about fifty feet diameter, on the western side of interior, is on the summit of the highest terrace, which opens on to a magnificent view of the surrounding country, including all the ruins. The platform is about twenty feet in height.

Messrs. Neal and Johnson, who spent three months in 1895 exploring these ruins, sank a shaft fifteen feet down through the centre of this platform, and came on the walls and floors of the original ancients. These have been filled in with stones thrown promiscuously off the tops of the buildings, thus reducing their original height. The floor of the platform was made of granite-powder cement a foot thick. On the lowest and original floor gold jewellery, consisting of beads, bangles, etc., was discovered. These were of different style of manufacture to the gold jewellery found on the platform floor. No silver ornaments were found on the original floor as was the case on the platform floor. The lower and original floor, also of Zimbabwe cement, was dented and broken by the throwing in of the stones from the walls. From the regularity of the tops of the walls it seems that the stone was thrown in, and that it did not fall in naturally either by decay or earthquake. The original inhabitants evidently lived on the lower floor. No skeletal remains were found in this shaft.

This platform is approached by a narrow twisting passage between walls of trimmed stone running in for one hundred feet, with a width of from five to seven feet. On the right-

hand side of the passage the wall is about ten feet in height, and the left-hand wall is about six feet in height. The passage has evidently had a gateway, without buttresses, barely large enough for two persons to pass together.* There is no trace of any stone building on the top of the platform. Some remains of comparatively modern native clay huts are to be found on this platform.

On the eastern inner side of the central building are comparatively modern smelting furnaces for copper and iron, with copper and iron slag still remaining. These furnaces have been partially destroyed. Outside on the south are old refuse heaps, where pieces of blow-pipes and portions of crucibles which were used for smelting copper and iron, and copper and iron slag can be found. At present no traces of the actual gold-smelting furnaces, but portions of gold crucibles, have been found. It is highly probable the gold-smelting furnaces will be discovered here. On the north side of the Central Ruin is a wall built in Zimbabwe style, which apparently formed part of the main buildings.

High Kopje Ruin.—This is an outlying building of minor importance, and is erected on a kopje about seven hundred yards south from the Central Ruin and overlooks the main ruins. The building appears to have been erected during one of the later Zimbabwe periods. It consists of a low wall surrounding the summit of the hill, and inside there is no trace of any other buildings. The wall in places is very much broken down. This ruin is protected on three sides by steep declivities of granite rock.

General notes.—The nearest ancient gold-workings are six miles south-east from the ruins.

There is very patent evidence of a general conflagration having taken place on the upper floors throughout the main

* The wooden posts in the recesses may have been fixed there by the Portuguese missionary who resided at the ruins somewhat earlier than 1760.

ruins. Masses of molten lead and copper and fused iron bangles and bronze arrow-heads have been found. This conflagration may probably have occurred when the Amaswazis invaded the country.

Evidences exist of several successive occupations by the ancients.

The remains of clay huts are either quite modern or those of the Mombo people, who, according to Portuguese records, built their kraal in these ruins. Mombo's son is said to have resided here at the time of the Amaswazie invasion.

Dr. Schlichter wrongly names these ruins "Mombo Ruins." The Mombo ruins are those on Thabas Imamba, which is within the old Kaffir Mombo kingdom, at which place King Mombo (variously written Mombo, Mambo, and Mamba) himself lived, and there he was skinned alive by the Amaswazis. Mombo, like Monomotapa, is a dynastic name assumed by each succeeding sovereign of those kingdoms respectively.

Mr. Wilmot's work, *Monomotapa*, gives particulars of the Jesuit missionary stations (1650–1760) in the Mombo and Monomotapa kingdoms.

Messrs. Neal and Johnson discovered the relics belonging to the Jesuit missionary at about forty yards north of the Central Ruin, in a small ruin on a low, bald granite elevation, where he is supposed to have resided. Here were found some seven hundred odd ounces of gold, in raw and manufactured and partially manufactured state. It is believed the priest must have been murdered by Kaffirs, or the gold and his personal articles and those pertaining to the church would have been removed. Only a very small portion of the seven hundred ounces of gold so found included articles of Zimbabwe period manufacture, and these the priest might have acquired by ransacking the ruins or by barter with the natives. Among this gold was an alluvial nugget

weighing over six ounces. It is highly probable that the priest combined trading with his sacerdotal functions.*

DHLO-DHLO RUINS†

By Franklin White

[The authors have great pleasure in complying with the request of the Directors of the British South Africa Company that Mr. Franklin White's interesting and practical paper on these ruins should be included in this work. Mr. Nicol Brown, of *Rezende, Limited*, London, has obtained Mr. Franklin White's full permission for its reproduction, and he has, with this object, also secured the sanction of the Anthropological Institute. The footnotes added by the authors of this work are purely explanatory.]

General Description.—The Dhlo-dhlo or Mambo Ruins,‡ the subject of this paper, are located some fifty miles north-east of Bulawayo, or, say, 19¾ degrees south and 20¼ degrees east.

The level above sea is about 4,500 feet.

They occupy a commanding position on a granite plateau between two streams forming part of the head-waters of the Insiza River, a tributary of the Limpopo.

The name "Mambo" is derived from the designation of the tribe of Kaffirs who occupied this country before the Matabeles conquered it.§

I was able to make a fairly accurate plan of the most important part of these ruins and to take some photographs which show the construction of the walls and the different styles of ornamentation used by the builders.

Some prominent bosses of bare granite were made use of as base for the walls, and the builders were fully aware of the tendency of granite to peel off in slabs under

* For finds see Chapter xi.

† From the *Journal of the Anthropological Institute of Great Britain and Ireland*, vol. xxxi., 1901, January to June.

‡ The Mamba, Mambo, or Mombo Ruins are at Thabas Imamba.

§ The Mambo dynasty was "wiped out" by the Amaswazis at the end of the fifteenth or beginning of the sixteenth century, though for a considerable time afterwards a remnant of these people lived in this district, and were the allies of the Portuguese against the King of Monomotapa (Wilmot).

atmospheric influences, perhaps assisted by fire. They thus obtained a large supply of material well suited for their purpose and close at hand. From the hills a few miles away they brought slabs of banded ironstones, which were ingeniously used to form a contrast with the grey of the granite.

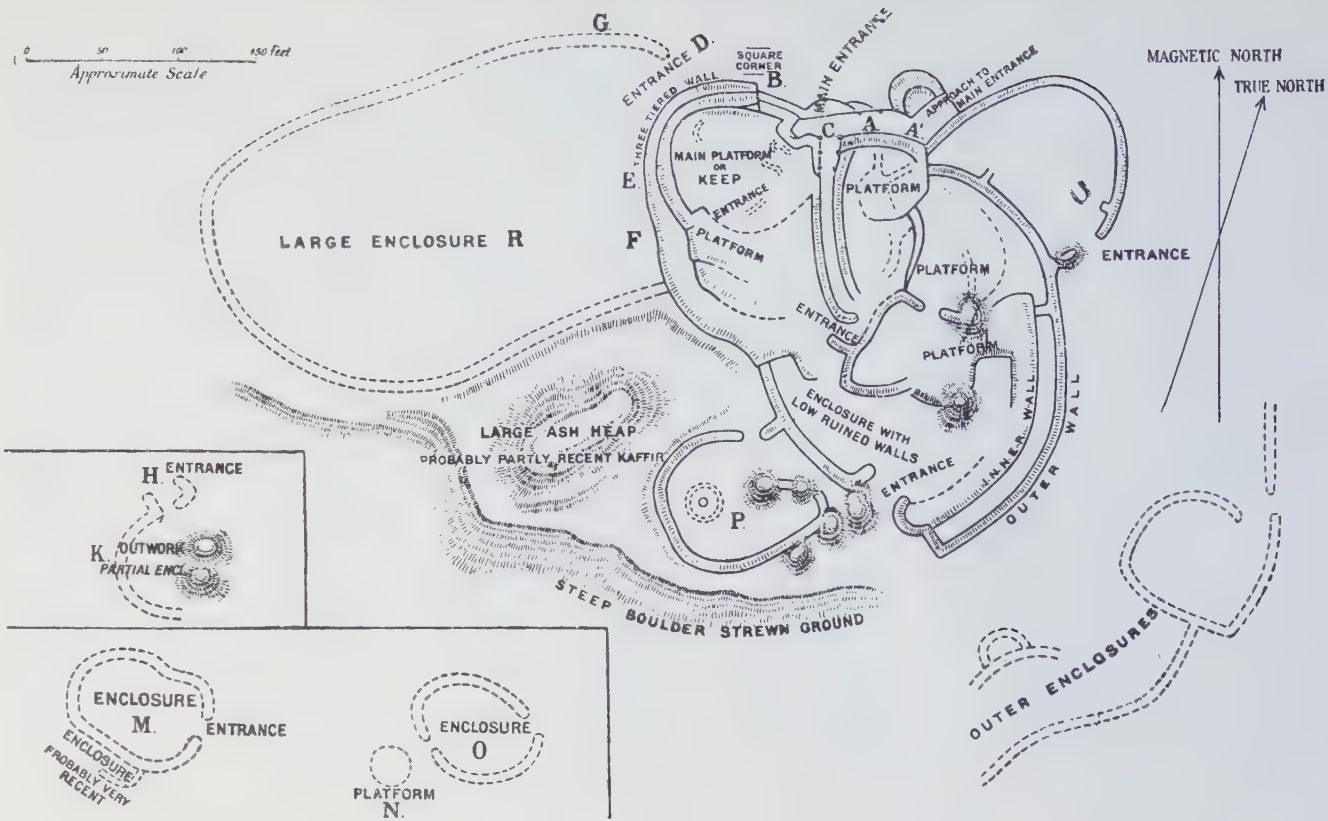
A reference to the plan (Pl. I.) will show that the main building is of a rough egg-shaped form three hundred and fifty feet long and two hundred feet wide, the longer axis running north-west and south-east. There are two outer inclosures attached to the main building, one being on the north-eastern and the other on the south-western side.

The northern and south-western sides of the ruin show the finest as well as the highest walls. The main entrance was undoubtedly on the north side. There are several isolated buildings surrounding the main ruin, of inferior construction.

Style of construction.—The buildings are made of blocks or small slabs of granite varying generally from seven to eleven inches in length and two and a half to five inches in thickness. The lower courses are generally made of larger blocks. Smaller pieces are used for the ornamental work.

There are no real foundations to the walls; they just begin on any ground firm enough to carry them. As they are seldom more than eight feet high in any one face the weight is not great. Where additional height was required the walls were raised in tiers, the upper one being stepped back, leaving a ledge varying from one to twelve feet in width, widening and narrowing without any apparent reason. No mortar or clay was used in the wall proper, but the top was covered with a layer of clay and ground-up granite.

Although curves and rounded endings-off to the walls



RUINS OF DHLO-DHLO

Prepared by Mr. Franklin White

were apparently preferred, still angular corners and straight lines could be made when considered advisable.

The batter of the walls varies, but is generally slight. At one point the top actually overhangs the base.

Some walls were made with two faces, the intervening space being filled up with rubble.

The courses preserve their thickness fairly well. In some cases a course widens, and in others disappears.

Boulders of granite lying on the surface were made use of as part of the wall whenever possible.

The most striking feature of the walls is the attempt made to introduce some style of ornamentation. In these ruins the following variations can be seen:—

(1) Lines of a different coloured rock (Pl. II. fig. 2; V. fig. 1).

(2) The chessboard, or chequered pattern.

This varies (Pl. V. fig. 3) from the ordinary gap and stone in one to eight courses, and groups of three spaces with thin blocks in two courses, separated by two thicker blocks.

(3) The zigzag pattern (Pl. III. figs. 2, 3; IV. fig. 2).

(4) The sloping-block (Pl. II. fig. 2; III. fig. 2; IV. fig. 1; V. figs. 1, 3) varied by alternating granite with red banded ironstone slabs.

(5) The chevron or fish-bone pattern* (Pl. II. fig. 2; IV. fig. 1) varied by alternating red and grey blocks, either in patches (Pl. II. fig. 2) or singly and in patches separated by thick granite blocks.

It will be noticed (in Pl. II. fig. 2; IV. fig. 1) that the sloping blocks incline respectively to the west and to the east, or in different ways on each side of the main entrance.

* Chevron and herring-bone patterns are two distinct patterns (see *Decorations*, Chap. xii.). Herring-bone pattern is probably intended, though chevron is present at these ruins.

As far as I have been able to observe, the ornamented patches commence and finish off in an arbitrary or capricious manner, and are not confined to any one part of the walls.

Description of ruins.—To the south and south-west of the main ruin there are numerous and extensive inclosures, the walls of which seldom exceeded six feet in height and were of somewhat inferior construction. As the grass was high no careful examination could be made. They were probably cattle-pens or locations for slaves.

The large inclosure (R) on the western side of the ruin is surrounded by a wall considerably destroyed, but in parts still showing a height of seven feet. It was well built, and was ornamented with a band of red stone and also with a course of sloping blocks (Pl. V. fig. 1).

About one hundred feet to the north of the main entrance is a roughly built inclosure (M) seventy-five feet by ninety feet, with one entrance on the east side (Pl. I. fig. 2).

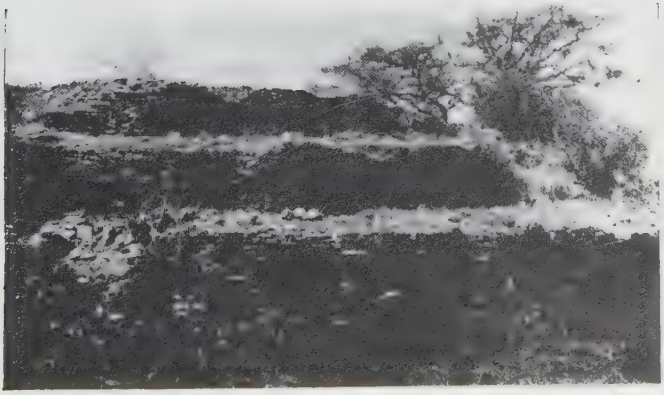
To the north-east of the main entrance and about one hundred and fifty-five feet away is a circular platform (N) considerably destroyed, but apparently four and a half feet high and thirty feet in diameter. Behind this there is another inclosure (O) some eighty feet by sixty feet, with two entrances, one on the north-east and one on the south-west.

On the south-west side of the main ruin there is a well-built inclosure or platform (P) ninety-five feet wide by one hundred feet long. It is built up on a rather steep slope strewed with granite boulders, some of which have been utilised as part of the walls. Only one entrance can now be seen—outside the main wall. There may have been a communication with the main ruin, but the wall at this point has been pretty thoroughly broken down, and no signs of a doorway can be seen.

About one hundred feet from P is the large area (R) three hundred feet long by one hundred and ninety feet wide.

1. NORTH-EAST SIDE

2. ENLARGED PORTION OF NO. 1



3. WESTERN FACE

DHLO-DHLO RUINS

It had clearly a main entrance at D, and others may have existed in the parts of wall now broken down. The ground here is flat and good, and this inclosure was probably a garden or cattle-pen.

Between P and R there is a mound of ashes, broken bones, potsherds, etc. It is evidently the refuse heap of the later Kaffir occupants of the ruins, and is now higher than the top of the wall of platform P. It probably lies over a small ridge or granite boss.

Some three hundred feet north-west from the main entrance is another stone construction (H) perched in a commanding position on the precipitous northern face of a granite boss which slopes gradually southwards (Pl. I. fig. 1). The wall is well made, but it apparently did not form a complete inclosure. There is a rather elaborate entrance at H, and some very regular ornamental work (Pl. V. fig. 3).

On the east side of the main ruin there is a large inclosure one hundred and twenty feet along the wall and ninety-five feet in depth. It had apparently one gateway on the south-east side. There are indications of interior divisions or walls, but the whole is too much destroyed and grown over by bushes to be properly examined without considerable labour.

Description of the outer walls.—The main approach was evidently on the north side, where there is an arrangement of roughly built slopes and platforms leading up to what is certainly the main entrance (C). This is seen in Plate II. figure 1 as a dark gap, and one side is represented in Plate IV. figure 3. A long, narrow passage running to the centre of the ruin attracted our attention, and a little work spent in clearing away the fallen stones and rubbish showed the remains of two stout posts of hard red wood five and a half feet apart on the west side. The tops of the posts are burnt. They lie partly in recesses carefully built in the

wall. On the east side can be seen similar recesses. The opening is eleven feet in width, and goes back fifteen feet, where there are signs of another pair of posts, and the passage commences seven feet in width.

The wall to the east of the entrance is still eight feet high, and is apparently nearly its original height. About twenty-five feet from the main entrance a chessboard pattern of seven courses commences (Pl. II. fig. 2) in a somewhat irregular manner. Over this and separated from the top by three courses runs a line of dark ironstone, and three courses above this there is another row of dark stones changing suddenly into a course of chevron pattern formed of white and dark stones in patches, the points being to the east. Three courses above the chevron, and commencing over the western end, is a row of sloping blocks dipping to the west. Four courses above this, and more or less over it, is a three-course line of chessboard pattern also commencing at the end of a line of dark stones. Two of these bands of dark stones run nearly to the main entrance, but this portion of the wall is built in a somewhat slovenly manner, although it cannot be said that there is distinct evidence that it has been pulled down and rebuilt. The ornamentation cannot be traced eastwards, as the wall is partially destroyed and partly hidden by the fallen stones.

On the western side the walls attain greater height, being in three tiers, the top being some sixteen feet above the base. At about sixteen feet from the side of the entrance the walls turn outwards for, say, five feet, and then run west for thirty feet to a carefully constructed corner (Pl. III. fig. 2). The first corner is partially filled up by a diagonal wall roughly built.

This section of the wall is ornamented as follows: At the base of the lower tier there is a row of chevrons spaced off by thicker blocks. The chevrons are formed of alternate dark and white blocks, and point to the west. Eight courses

1. NORTH-WESTERN SIDE

2. ENLARGED PORTION OF NO. 1

3. NORTH-WEST CORNER FROM EAST

DHLO-DHLO RUINS

above this is a row of sloping blocks (white and dark) dipping to the east. Three courses over this runs a three-course line of chequers.

The upper tiers were no doubt ornamented, but the faces are much damaged now.

To the west of the second corner (Pl. III. fig. 2) we see the first piece of the zigzag pattern commencing near the top and about three feet from the corner. It can be traced westwards as far as the wall is intact, but does not appear to have continued right round to the western face (Pl. II. fig. 3). Three courses below the zigzag is a line of sloping blocks dipping east, and three courses below this is a two-course chequer pattern. There is, therefore, no continuity of pattern to be seen in the lower tier. The chevron pattern is also missing to the west of the corner.

The two upper tiers were ornamented, the upper one with a zigzag pattern apparently corresponding to that on the western face. There are patches of zigzag pattern in the middle tier, but the walls are too much destroyed for me to be able to trace if the patches on the upper and lower walls correspond at all.

The western face (Pl. II. fig. 3) is very fine, the tiers being seven feet, five feet, and four and a half feet high, standing back each from twelve to five feet at the widest part, thus leaving broad platforms or ledges, which, however, narrow considerably at the turn (D).

The upper tier finishes off at a corner, where there were probably steps leading to the top platform. The ornamented courses finish about three feet from this corner.

The patches of ornamentation follow more or less regularly along the north and west walls of the building, and are most abundant where the walls are most bold.

The high western wall gradually alters beyond the corner. The upper tier apparently turned eastwards, inclosing the upper platform, about eighty feet in diameter.

The second tier continues southwards for about fifty feet, then turning eastwards to form the second platform.

The bottom tier runs on for about one hundred and twenty feet, then a part turns east at right angles and forms another platform and part of the inner line of defence. An extension of it ran some hundred feet to the south-west, finishing off at a huge granite boulder which forms one side of the southern entrance.

At the western side of this entrance a well-built wall commences. It is six to eight feet high and about five feet wide at the top. It runs without a break round the south and eastern side until it butts up against the continuation of the north-eastern wall. Inside the wall is a passage, or ditch, eight to fifteen feet in width, blocked at both ends. Apparently the idea was to catch the enemy between the outer and the inner walls.

Central passage.—This commences at the northern or main entrance and runs about due south (magnetic) for one hundred feet with a width of five feet to seven feet. It then turns off a short distance to the south-east. The two walls finish with well-made square ends.

The walls of the passage are now about six feet high, but there is some rubbish on the bottom.

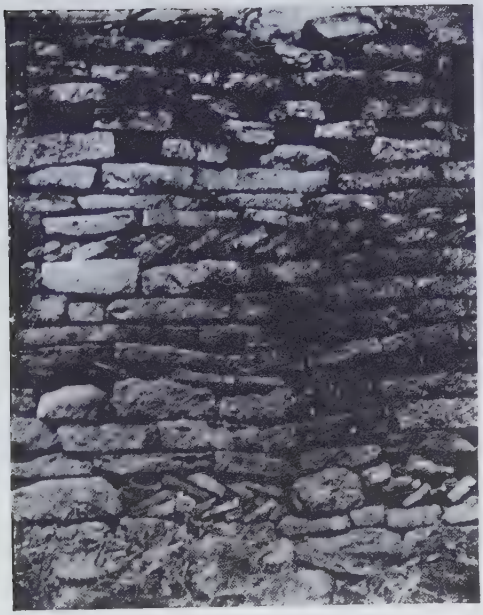
A large heap of stones blocks the main entrance. It is possible that it was originally covered over with wooden beams carrying a stone parapet.

The recesses in the wall in which the posts are partially embedded may correspond to what Mr. Bent saw at Zimbabwe and considered as groves for a portcullis.*

Platforms.†—The top of the main platform was evidently covered over with cement or fine concrete, made of clay and

* See *Entrances*, Chapter xii.

† These platforms are undoubtedly the work of a very late Zimbabwe period, or of the Mombo people. Messrs. Neal and Johnson sank a shaft through the main platform to a depth of fifteen feet and came on the original floors of the builders (*vide ante*).



1. PORTION OF NORTH-WEST SIDE

2. SQUARE CORNER IN NORTH-WEST SIDE

3. ENTRANCE IN NORTH FACE

ground-up granite. Treasure-seekers have dug a hole near the centre, exposing chiefly loose stones. On the top of the platform are several raised ledges or benches of concrete.

On the platform east of the main entrance there are indications of a large circular dwelling which evidently had hard wood posts built in a cement wall. The same thing can be seen on the platform to the south.

In the inclosure P are the remains of a circular clay wall ten feet in diameter, with a small hole about two feet in diameter in the centre.

On the top of the granite boss at H are remains of three circular clay walls or floors.

It is impossible to say whether these clay or cement structures belong to the same age as the stone walls. Some are of much better construction than others, the better being probably older Kaffir work. The stone-wall builders may have used circular dwellings, and the idea would be copied by the natives of the country, although in an inferior class of work.

In the Khami Ruins, near Bulawayo, are remains of a superior class of circular dwellings, which I am told are similar in character to huts in use at the present day by Kaffirs living near Lake Ngami; on the granite hills near Khami can be seen remains of very inferior circular mud huts built by natives of the present day.

There is a notable absence in the Dhlo-dhlo Ruins (as in all others) of the remains of dwellings and of places of burial corresponding to the number of persons who must have been employed in their erection and occupation.

Indications of occupation.—I was not fortunate to find anything of note in these ruins, except a piece of thin silver plate with an embossed pattern and a few pieces of broken glass, possibly parts of the widely distributed gin-bottle partly calcined by the grass fires. I am informed that two small Portuguese cannon and a considerable quantity of

silver articles such as would be used by the Jesuit Fathers who would accompany an early Portuguese expedition* were also found here, chiefly round the inclosure (H). No doubt these ruins were used as a convenient resting-place, but it can be inferred that the expedition left hurriedly.

In the large ash heap I was only able to find pieces of pottery of inferior manufacture, pieces of bones, and teeth of animals, chiefly of the antelope tribe.

I am not aware that any emblems† have been found such as those which Mr. Bent discovered at Zimbabwe. The Dhlo-dhlo Ruin, therefore, seems to have been a fortress rather than a temple, and was probably one of a chain of strongholds connected with the main route from the east coast. Sofala Bay was probably the port of entry, as Portuguese records refer to it as being occupied by "Moors," a term which is equivalent to "inhabitants of Africa."

But even if sacred emblems are wanting, it seems that if people of Phœnician origin built these structures the pronounced characteristics of style of building, of general design, and also of the ornamentation used will be sufficient as points of identification with such work in other parts of Africa or Asia.

One thing is clear, and that is that this class of building is only found in South Africa in the vicinity of gold-bearing districts. Also worked gold is found about them.

There are no definite indications that the occupants were destroyed and any deliberate attempt made to pull down their buildings. The harm that has been done may be fairly

* The Portuguese missionaries occupied stations in Monomotapa long before the arrival of the ill-fated military expedition. It was the reports of the missionaries, who then had twenty-two ecclesiastical districts in Monomotapa, with many chapels, that induced the Portuguese to attempt to conquer Monomotapa. Barreto never succeeded in penetrating the country, and the title by which he is generally known, of the "Conqueror of Monomotapa," was given him before he had even left the Tagus, when setting out upon his expedition (see *Monomatapa*).

† A carved soapstone beam was found at Dhlo-dhlo by Mr. H. Rogers. This is now in the museum at Bulawayo (see illustration).

1. OUTER ENCLOSURE. (G)

2. ENTRANCE TO OUTER ENCLOSURE. (H)

3. OUTER ENCLOSURE OR GUARD HOUSE. (H)

DHLO-DHLO RUINS

ascribed to the ordinary Kaffir in search of material to make his cattle kraal or base of his huts. If the Phœnicians were the builders they may have abandoned the country in the same manner as the Romans left Britain when their mother country was in the last stages of its existence. If this theory is correct, these ruins would be at least two thousand three hundred years old.*

It is quite possible that the native occupants of the country would retain some of the ideas of building, of pottery work, and of working the gold mines, but these would gradually die out.

Mr. Bent, in his *Ruined Cities of Mashonaland*, attaches great importance to the following points as seen in the Zimbabwe and other ruins:—

(*a*) That the patterns on the walls were constructed with a special purpose, having always the same aspect, viz. south-east (p. 103).

(*b*) The south-eastern wall is much better built (p. 105).

(*c*) The chevron pattern coincides with the sacred inclosure inside (p. 110).

(*d*) The wall in front of the sacred inclosure was decorated with courses of black slate omitted in the inferior continuation (p. 112).

(*e*) Special attention was paid by the constructors to the curves (p. 130).

At the Dhlo-dhlo Ruins we find—

(*a*) and (*b*) The most ornamented and better constructed portion of the building was on the north and north-west.

(*c*) The chevron† pattern runs all round this portion, probably in patches.

(*d*) Black slate courses are to be seen in all the main walls and also in the wall of the outer inclosure.

(*e*) The curves of the walls are apparently chiefly influenced

* See Chronological Table, *ante*.

† See previous note on *Ornamentation*.

by the desire to take full advantage of the ground on which they are built, and by the proximity of boulders.

It seems, therefore, that before any theory can be definitely put forward as to the special significance of any of these points the characteristics of a number of different ruins should be carefully studied and recorded.

N'NATALI RUINS

Situation.—These ruins are situated fourteen miles north-east of the Dhlo-dhlo Ruins, in the Upper Insiza district, and are built upon a bare granite bluff rising five hundred feet from the level of the country, prominently protruding from the north-east side of the main Insiza Range. The ruins command a most extensive view of the surrounding district, and as far as the Shanghani Flats, and the Selukwe, Filabusi, and Belingwe Ranges. The country round about these ruins, except for the Insiza Range and a few isolated kopjes, is flat and open. These ruins are within the old Mombo kingdom.

Period.—These ruins are believed to be of the first period of Zimbabwe architecture. Here are noticed the massive character of the walls with the batter-back, both inside and outside, of the first Zimbabwe period, the rounded entrance walls, the excellent workmanship on inside and outside walls, the foundations on formation rock following surface outline, and the elliptical plan of building. The front main wall facing west has almost square corners rounding off towards the elliptical curves of the walls on the other sides. There are additions and reconstructions of the late Zimbabwe periods. The original parts of these ruins are believed to be older than the ruins at Dhlo-dhlo.

Importance.—These ruins, though thought to have been erected earlier than Dhlo-dhlo, rank in importance next to them. Extensive gold-smelting operations were carried on

here, and in the close vicinity are several minor and dependent ruins.

Extent.—The area covered by these ruins exceeds ninety feet by seventy feet.

Construction.—The ruins are built upon the granite formation and of granite blocks. The walls, excepting the main front wall, which is laid in a comparatively straight line, are built on curved lines. There are two entrances, on the west and east respectively. The masonry work, both inside and outside, is excellent. The ruins present the characteristics of massiveness and solidity, the walls having a base of about ten feet, with a width at their present tops of four feet. It is believed that the cellar built in the filled-in portion of the ruins, and which has Zimbabwe stonework lining, was built in the third or fourth periods, of which the filling-up process was a common feature.

The castellated battlement or parapet and the terrace or banquette are probably the work of a period later than any Zimbabwe period. Possibly these were constructed by the Portuguese (1560–1750), as their forts have to some extent work, especially in loopholes in walls, in resemblance to these in construction and evident purpose.

Ornamentation.—The front main wall, which faces the west, is most profusely covered with check pattern, but there is no decoration on the curved wall, or on any of the divisional walls now standing.

General description.—These ruins, both on account of their situation and decoration, are considered to be the prettiest ruins in Rhodesia. Their position on the high and steep protruding bluff on the Insiza Range gives them a strongly strategic character, making them difficult to approach and yet enabling them to dominate a large area of country. The improvised castellated battlements of a very late period greatly add both to the beauty and interest of the ruins, and afford an agreeable relief to the usually

monotonous contour of Rhodesian Zimbabwe architecture.*

The front main wall is about ninety feet in length, and its present height is about thirteen feet. At the northern end of this wall is an entrance, and between this entrance and the southern extremity of the wall the top of the wall has castellated battlements, made by taking out from the original walls pieces of masonry three feet six inches long, four feet wide, and eighteen inches in depth, at intervals all along the wall, the sides and tops of the walls left standing being coated with cement. Behind these battlements, and running behind the main wall, is a terrace or banquette built up from the ground to such a height as would permit a man to stand upon it and look over between the battlements, at the same time to take shelter behind them. This defence was not that of the original builders of the ruins, nor is it a characteristic of the second period, nor of the third or fourth periods, but more probably still later.

The main entrance on the western side has rounded walls and is five feet wide, and is believed to have had a flight of steps of a later period leading up to the summit of the northern portion of the ruin which had subsequently been filled in.

From the northern and southern extremities of the front main wall walls curve round to the east to a distance of seventy feet from the front wall. Where these walls meet is the eastern entrance, three feet six inches wide, which has square-ended walls.

There are four inclosures built up against the inside of the southern curved wall, and these average in size fourteen feet by fourteen feet, and have rounded entrances. These inclosures have not been filled up by reoccupiers. The northern portion of the inside of the ruins has been filled

* In Ruin No. 1 at Zimbabwe Sir John Willoughby discovered traces of a parapet on the top of the wall, with terrace or banquette behind it.

in and cemented over, and it is therefore impossible, at present, to say how many inclosures it contained.

In the filled-up portion of the ruins, the work of either the third or fourth period, and underneath the cemented floor, was discovered a round cellar about six feet deep with a diameter of about four feet, the sides of which are very neatly built of small granite blocks laid in Zimbabwe style. The floor is made of the usual granite cement. The top of this cellar is domed over with stonework to the centre of the top, in which there is an aperture just large enough for a man to pass through, and on the top of this aperture was placed a large slab, evidently used as a cover. The top of this domed roof is six inches below the cemented floor and was entirely covered by it. There were no finds discovered in this cellar. This cellar is similar to the five cellars discovered in the Mudnezero Ruins and is larger than those found in the Regina Ruins.

Large débris heaps are on the east side of the ruins, opposite the entrance on that side.

General notes.—These ruins are of particular interest for the following reasons:—

1. They are the prettiest ruins yet found in Rhodesia.

2. They are the only ruins with battlements and banquette terrace (except those at Zimbabwe and Lundi).

3. The discovery of the cellar, and

4. Evidences of very extensive gold-smelting operations having been carried on here.

Finds.—Zimbabwe period (?). Ancient gold crucibles with gold in flux. Pottery of the most ancient manufacture. Gold beads, gold pellets, gold tacks, beaten gold, and portions of gold bangles.

Monomotapa-Mombo period (?). Copper bangles and beads.

Portuguese period. Modern pottery and glass similar to that found at Dhlo-dhlo, Khami, and Mazoe District, and all places once occupied by the Portuguese.

IMPANKA RUINS

Situation.—Three miles north-east of the Mudnezero Ruins, in Upper Insiza, on a low rise yet commanding a fairly extensive view. The ruins are accessible from all sides.

Period.—Undoubtedly first Zimbabwe period; elliptical plan of building. The walls, which are massive, are laid on formation rock, battered back on both sides; workmanship good on both faces, inside and outside. The outer entrances have squared walls, but inner entrances rounded walls. During a later period the inclosures have been partially filled up by reoccupiers.

Importance.—The massive character, extent, and ornamentation suggest that these were important ruins. There is every probability that when the original floors are opened out that both temple and gold-smelting remains will be found.

Extent.—The ruins cover an area exceeding sixty feet by forty feet.

Ornamentation.—Herring-bone pattern on the outside of west wall at the left side of entrance, about twelve feet in length and three feet six inches from the present surface of the ground, and like the herring-bone pattern at Mudnezero, is made of ribbon slate.

Description.—Built of granite blocks on the granite formation. Width of walls at bases about five feet, at top over three feet, average of reduced heights five feet. There are three inclosures, with an unusually large courtyard. The two smallest inclosures average twenty feet by fifteen feet. The two entrances face the west and south-east respectively. Débris heaps are extensive, and include débris of several periods.

Note.—These ruins have not been explored.

Finds.—Zimbabwe periods. Gold beads, gold tacks, portions of gold crucibles, and oldest Zimbabwe pottery.

Mombo period. Portions of copper bangles, pieces of copper, and pottery of later date.

CHOKO RUINS

Situation.—On the north-west side of the Choko Hills, Upper Insiza, and about fifteen miles east of Impanka Ruins, on a high and prominent kopje, commanding an extensive view of the country towards Gwelo, Selukwe, and the Shanghani and Insiza Ranges.

Period.—Originally first Zimbabwe period, but additions of second and still later periods. The oldest portions of the buildings have been filled in and cannot well be examined, while a rising terrace of the second period with square entrances has been built upon them. The first-period building shows elliptical plan, massive building, good workmanship, true courses. First-period batter-back and foundation on bed-rock. The inferior workmanship of second period is patent.

Importance.—Minor importance.

Extent.—Diameter sixty feet.

Ornamentation.—None on walls now standing.

Description.—The ruins are built of granite on granite formation. As the buildings have been filled in, it is impossible to give width of walls or to state the number of inclosures. Height of present walls, including first and second period walls, about seventeen feet, of which twelve feet is the height of the first-period wall. The filled-in portion, on which is a platform with cemented floor, is similar to the platform at Dhlo-dhlo.

Note.—Owing to the steep declivity of the hill all débris has gravitated to the bottom levels and become distributed; still, panning showed traces of gold-dust.

Finds.—No finds of any importance were made as no exploration work has been done here. Copper beads and bangles were found with skeletal remains of a comparatively modern period close under the top floor. This native must have worn at least four pounds' weight of copper ornaments.

MUDNEZERO RUINS

Situation.—These ruins are situated four miles north-west of Chilichani Kopje, on a tributary of the Upper M'Chingwe River, in Upper Insiza, and are located on a low knoll facing towards the open country, and command an extensive view, including the Selukwe, Filabusi, and Belingwe Ranges.

To reach these ruins either one of two directions may be taken. There is no waggon track to these ruins. Leaving N'Natali, proceed south, hugging the east side of the Insiza Range, passing Lobela Ruins two miles, Shebona Ruins three miles further on, and the Impanka Ruins a further two miles, from which the Mudnezero are two miles further south. The other direction is from the store opposite the Regina Ruins, proceeding north for four miles, hugging the east side of the Insiza Range. On the west side of the ruins is the Pioneer Reef (Mashonaland Agency).

Period.—These ruins, excepting the additions, are of the first Zimbabwe period. They are built in an elliptical form, have massive walls, the masonry on the inside of walls, so far as explored, equals that shown on the outside, the workmanship is of the best Zimbabwe style, the entrances have rounded walls, the walls have the oldest Zimbabwe batter-back both inside and outside, and the foundations of such older parts are on bed-rock.

There are additions of the second period and of the third and fourth periods, during which latter periods the buildings

appear to have been constructed of granite blocks taken from the older portions of the ruins.

Importance.—Though not large and extensive ruins, these were evidently of some considerable importance. There are distinct evidences of gold-smelting operations having been carried on by the ancients at these ruins.

Extent.—The main walls still standing cover an area of about fifty feet by forty feet, but these ruins must at one time have covered a very much larger area, as ruins of walls built in true Zimbabwe style extend on the west side to some considerable distance beyond the present main walls.

Ornamentation.—The only ornamentation in these ruins is that of the usual herring-bone pattern, which is on the north-western portion of the outside wall. This is about seven feet in length and four feet above the present surface of the ground. The peculiarity of this ornamentation is that, like the herring-bone pattern in the Impanka Ruins, it is made of ribbon slate, and altogether different from any other rock used in these patterns in any other part of Rhodesia so far as has been discovered. This ribbon slate is found in the locality.

Construction.—The ruins are built on granite formation and of granite blocks. The width of the main walls on the present reduced top averages three feet six inches near the entrance. The width at the bases cannot be ascertained owing to the filling in of the internal inclosures during later periods. The higher portion of the ruins, including the retaining wall, is evidently of the second period, and is of lighter construction. This is shown by the thickness of the retaining or terrace wall of the second period, which is in many cases only the width of the granite blocks, on the face against which at the back have been placed in promiscuous fashion unhewn stones of all sizes with soil. The lower portions of the walls extending for some distance

beyond the main ruins are of the first Zimbabwe period workmanship. It is at present impossible to examine the interior inclosures owing to their having been filled in and cemented over. The original buildings completely crowned the summit of the knoll.

General description.—The main entrance is on the north-west side, and is three feet six inches in width, with rounded walls so far as can be seen. In a later period the entrance has been filled in to about eleven feet in height. This entrance appears to have had steps of a later period leading up to the summit of the filled-in platforms. The whole of the interior having been filled in, exactly as in the case of the platform in Dhlo-dhlo Ruins, and cemented over, it is impossible to give any description of the inner portions of the building. The original floor of the builders is presumably about eleven feet below the present cemented floors. The finds at this ruin make it highly probable that gold-smelting furnaces will be found when the original floors are opened out.

In the filled-in portion of these ruins are three cellars, similar, save in size and depth, to the cellar at N'Natali Ruins. These are considerably larger than the five cellars found at the Regina Ruins. The three cellars are nine feet in depth and six feet in diameter, and are built in Zimbabwe style, the roofs being domed over. It is probable that these were erected just before the inclosures were filled in.

There are fairly extensive débris heaps on the west side.

General note.—The interesting features of this ruin are—

1. The three cellars in the filled-in portion of the ruins.

2. The introduction in the herring-bone pattern of ribbon slate as at the Impanka Ruins.

Finds.—Zimbabwe periods. Solid gold beads, gold tacks, beaten gold, portions of gold bangles, pellets of gold, and pottery of apparently the oldest Zimbabwe manufacture.

Mombo period. Copper beads, not solid and punched, but beaten round; copper bangles, both solid and made of one or two strands of wire twisted; lumps of copper, and twisted iron bangles.

Portuguese period.—Glass and glazed pottery similar to that found at Dhlo-dhlo and at all ruins in this district.

CHAPTER XX

RUINS IN GWANDA DISTRICT

CHUM RUINS

Situation.

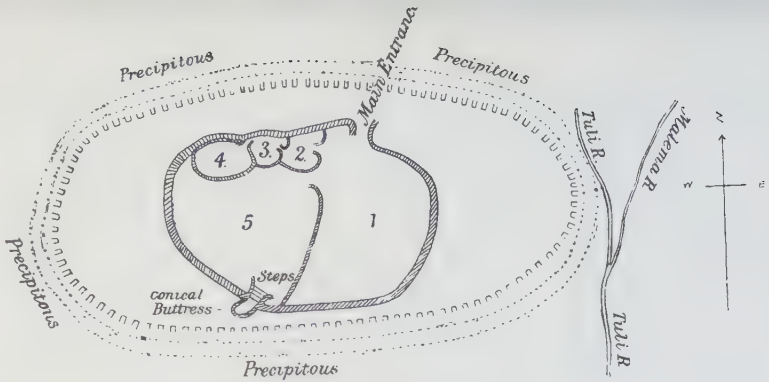
THESE ruins are on the summit of a kopje two hundred yards from the west side of the junction of the Malema and Tuli Rivers, in the Gwanda district.

Period.—These buildings were erected in the first Zimbabwe period. The inside walls show as good workmanship as the outside walls. The main and divisional entrances are rounded and not squared. The batter of the walls, both inside and outside, is similar to that in the oldest portions of the Great Zimbabwe. The plan of the walls shows an elliptical form. There are no straight walls or angular corners. The rising-terrace system is absent, and the foundations reach bed-rock and follow surface outline. There are additions and reconstructions of the later Zimbabwe periods.

Importance.—The size, extent, and situation of the ruins show that they were of considerable importance, and evidently this place was the capital town of the district surrounding it, which contains several minor and dependent ruins. Probably the temple and gold-smelting furnaces served for the whole of this district.

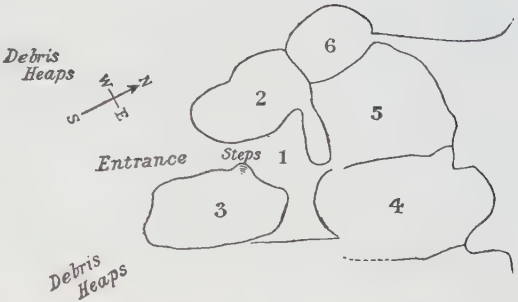
Extent.—The ruins cover about half an acre.

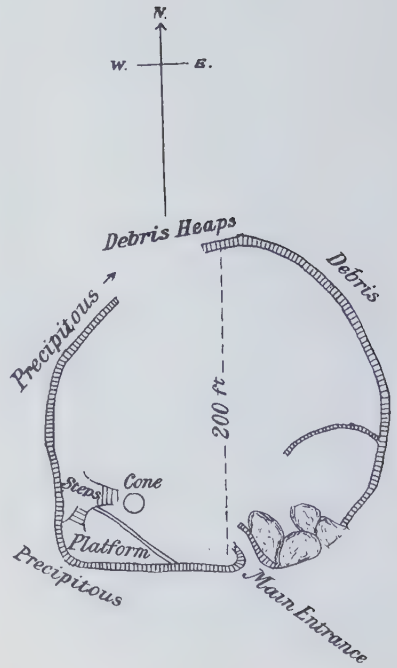
Construction.—This ruin is one of the very few which are built upon the diorite formation, which is here intrusive; but



CHUM RUINS, WEST GWANDA

CHECK RUINS, MPATERIE DISTRICT





THABAS IMAMBA RUINS,
UPPER SHANGHANI

though on the diorite formation, it is built of the usual granite blocks, which must have been carried there from a considerable distance. The peculiarity in the construction of this ruin is the round buttress protruding from the outside of the south-western wall. This is described later. The building contains two large inclosures and three smaller ones. The bases of the main walls are massive, and the workmanship is of the best Zimbabwe style. The walls still standing are about five feet high from the outside level.

Ornamentation.—There is no ornamentation in any of the walls now standing.

Orientation.—This has not yet been fixed.

General description.—The main entrance is on the north side of the ruins, and has a precipitous approach among rocks. It faces the nearest point on the Tuli River, and the side on which the approach is naturally the most convenient. Immediately facing the inside of the entrance is a large courtyard (No. 1) similar to that found in all the capital town ruins. This courtyard has a cemented floor except at the northern end, where the diorite rock protrudes. The courtyard occupies more than a third of the total area covered by the ruins. Turning to the right inside the entrance, there are three small inclosures (Nos. 2, 3, and 4), all connected with each other by rounded entrances. The entrance to these three inclosures is through the east side of No. 2 inclosure. The divisional walls, which are about two feet wide, are laid on curved lines, the highest part now standing being about five feet. No. 2 inclosure is about eight feet by ten feet, No. 3 a little larger, and No. 4 about fourteen feet by sixteen feet. Each inclosure has a cemented floor with bevelled edges. On the south side of No. 2 inclosure is another large inclosure occupying an area slightly smaller than that of No. 1 inclosure, and this also has a cemented floor throughout.

The most interesting feature of these ruins is the round

buttress, which protrudes out from the main wall on the south-west side. The present height of this buttress is about nine feet, its diameter at the base is about eight feet, and at the present top about four feet. Rising from the cemented floor of No. 5 inclosure to the top of this buttress is a flight of about seven steps, broad at the bottom, but narrowing at the top to the width of the summit of the buttress. The steps are identical with those at Zimbabwe, but those at Zimbabwe descend, while these ascend to the platform on the top of the buttress. The similar tower-like buttress at Umnukwana faces the east, this the south-west.

The main wall of the buildings on the north side is considerably destroyed, portions having fallen down the face of the hill. Judging by the amount of the débris, this must have been the highest portion of the ruin.

General note.—There are no signs whatever of these ruins having been reoccupied since the time of the ancients, and there is not a single trace of any Portuguese or Kaffir articles such as pieces of pottery, etc., which are found in so many ruins. Like the ruins of Mundie, these ruins have not been filled in as at Dhlo-dhlo, Khami, Thabas Imamba, etc., and the original floors, therefore, remain the present floors. It is the ruins which show no evidence of reoccupation that provide the best clues to the methods of the ancients. In those ruins where there has been reoccupation there are found ornaments of various periods dating down to the Monomotapa times; and one is apt, in some cases, to confuse the finds of one period with those of other periods, but in an unoccupied ruin we only discover the actual belongings of the ancients. Again, in a reoccupied ruin the top walls have been stripped of stones for the purpose of filling in the inclosures, which, when filled in to the reduced level of the walls, are covered with a cemented floor. This vandalism, beside making exploration extremely difficult, destroys much of the walls, and in some cases we consequently find that

the Zimbabwe patterns have been pulled down and destroyed. Reoccupiers also often removed stonework from the walls of the original buildings in order to provide material for smaller and inferior buildings erected within the ruins.

Finds.—Zimbabwe periods. A large quantity of portions of ancient gold crucibles with gold showing in the flux.

Under the ancient cement floor in No. 1 inclosure were found large skeletal remains of a man who must have been fully seven feet in height. These were complete and in a perfect state of preservation, and were in the possession of the Hon. Maurice Gifford, who informed Messrs. Neal and Johnson and others that Mr. W. Y. Campbell, since deceased, was taking these to England to be reported upon by experts. The shin bones were over two feet in length, and the gold bangles round his ankles were of an immense size. Altogether sixteen ounces of plain gold ornaments were found with this ancient. His remains had been wonderfully preserved by the cement floor, which had hermetically sealed them from atmospheric conditions. Under the cemented flooring of inclosures Nos. 2, 3, and 4 skeletal remains of ancients were found, each with plain gold ornaments. Two gold bangles, evidently belonging to a small child, and too small for a youth, were also found.

TULI RUINS

Situation.—On elevated ground five hundred yards from the Tuli River and on the west bank at five miles west from Doppie's kraal, south of the Matoppa Hills, Gwanda. Country heavily wooded. The best approach is from the east.

Period.—First Zimbabwe period. Elliptical plan of building. Rounded ends of walls of outer and divisional entrances. Walls massive, and on rock foundation. Batter-back and good workmanship both on inside and outside of walls.

Importance.—Major. Probably this was the capital centre for all the ruins in the Gwanda district. No temple remains have been discovered, but it is probable that when explored these and traces of gold-smelting operations may be found.

Extent.—About one hundred and seventy feet by eighty feet.

Ornamentation.—None.

Description.—The ruins are on the diorite formation, and are built of diorite slabs of the size of the usual Zimbabwe blocks, but the detached wall running at an angle in front of the west entrance at a distance of five feet is built of granite blocks, which must have been brought from some considerable distance. Width of bases of walls five feet, at tops three feet six inches, and present height fully twelve feet. There are six inclosures, also a courtyard, which covers an area of fifty feet by forty-five feet. There are two entrances, one on the south-west side and the other on the north-east. There are no signs of any steps having existed. Débris heaps.

Note.—The detached wall in front of the west entrance is the only one so far discovered, except that at Bochwa Ruins, which runs at an angle from the main wall.

Finds.—A few gold beads and copper beads and bangles.

LUMENI RUINS

Situation.—Two miles east of the main road drift over the Lumeni River, on the left-hand side going towards Gwanda from Bulawayo, on a low, oval-shaped granite kopje on the south bank and some three hundred yards from the river. The best approach to these ruins is from the west.

Period.—First Zimbabwe period. Elliptical plan of building. Walls massive, usual batter on outside of walls, inside being filled in during a late period; inside walls cannot be

examined. The workmanship is excellent, and foundations are on the rock. Additions of second period.

Importance.—Major. Gold-smelting operations were carried on here. Temple remains not discovered owing to filling in of building.

Extent.—One hundred and sixty feet by fifty feet. There is evidence of these buildings being at one time higher and larger.

Ornamentation.—Check and herring-bone patterns on the outside of the north-east and west portions of the main walls.

Description.—Built of granite blocks. Present height of walls averages nine feet. Base cannot be measured, as building has been filled in to above the present level of the reduced heights of the walls. No traces of divisional walls, though probably these exist. The ruins are open on the south side, the wall having, it is believed, been removed for erecting later and inferior buildings. On the north and west sides of the ruins, and at a distance of about four feet, is a retaining wall, or terrace, of the second-period architecture. The entrance is on the south side. The débris heaps are extensive.

Finds.—Zimbabwe periods. Ancient gold crucibles, gold beads, gold wire, gold tacks, gold-dust, and gold pellets, and ancient pottery.

Later periods. Copper crucibles, pellets, pieces of copper, copper wire, and pottery, glazed and unglazed, and beads of late date.

GOLULU RUINS

Situation.—On the west bank of the Melima River, near Shongursi, two miles north of Wild Dog and Umbi reefs, in the Gwanda district, on a low and isolated kopje in fairly wooded country. The best approach to the ruin is from the south.

Period.—First Zimbabwe period. Plan of building elliptical, fairly massive, batter-back, and good workmanship inside and outside of walls, which are on the formation rock.

Importance.—Minor.

Extent.—About fifty feet by forty feet; no traces of further extensions.

Ornamentation.—Check and herring-bone patterns on the outside of western wall and about five feet above the present surface of the ground.

Description.—Built of granite blocks. Owing to filling in of interior it is difficult to obtain measurements of walls or the number of the inclosures. On the western side the width of wall at base is about six feet, at present tops three feet six inches, while the highest part of the wall is about twelve feet. The main entrance is on the west. No steps are visible. Débris heaps are extensive.

Finds.—A few gold beads and gold-dust and pottery of all periods of manufacture.

LITTLE GOLULU No. 1 RUINS

Situation.—Three miles in a westerly direction from the Golulu Ruins, in the Gwanda district, on the east slope of a long granite kopje. The best approach is from the east.

Period.—First Zimbabwe period. Elliptical plan of building, massive construction, rounded entrance walls, excellent workmanship, and foundations on bed-rock.

Importance.—Minor.

Extent.—Forty feet by twenty-five feet.

Ornamentation.—None now visible.

Description.—Built of granite blocks. Owing to this building having been filled in, it is impossible to give measurements of walls, but the highest portions of the walls now standing are nine feet and the width on the

present tops four feet. The only entrance is on the N.N.E. side, and this is buttressed on both sides. No inclosures can be traced. It is believed that a flight of steps will, on exploration, be discovered near the entrance. These ruins are in a very bad state of preservation, as stones from the hill have fallen down and carried away portions of the walls. Débris heaps located.

Finds.—Gold-dust and small gold beads, copper beads, bangles, and pottery of all periods.

LITTLE GOLULU No. 2 RUINS

Situation.—On the north-east slope of a very high granite kopje about four and a half miles due N.N.W. of Golulu Ruins. These ruins command a view of considerable extent over the country. The best approach is from the north.

Period.—First Zimbabwe period. Elliptical plan of building. Walls very massive, with foundations on rock. Workmanship excellent, and first-period batter both on inside and outside of main wall.

Importance.—Minor.

Extent.—Diameter about forty-five feet.

Ornamentation.—None.

Description.—Built of granite blocks. Width of bases of walls nine feet, at present tops four feet, and height of walls still standing twelve feet. The main entrance is on the north-east side. Two walls run for about ten feet from the inside of main walls, and apparently are divisional walls incompleted.

Finds.—Pottery of all periods. No gold has been found here.

MAUWE RUINS

Situation.—On Antelope Road, twenty-six miles south of Antelope Pass, Matoppa Hills, and near where the Mauwe

River crosses the road, and about three hundred yards on the left side of the road going south.

Period.—First Zimbabwe period.

Importance.—Minor. Evidently this was a fort protecting the local gold-reef district, where there are numerous ancient workings.

Ornamentation.—Check pattern on the outside of north-east wall. Herring-bone pattern inside and immediately behind the check pattern. The latter pattern not having any courses over it owing to the dilapidation of the wall, is fast becoming destroyed.

Extent.—Diameter between fifty feet and sixty feet.

Description.—These ruins are built of granite on the granite formation. Height of wall from outside level about seven feet, width of base, calculated by the batter-back, five feet. The plan is elliptical and the workmanship both inside and outside is excellent. The ruin has been deliberately filled in with soil, as owing to the position of the building the earth could not have silted inside. Judging by the walls, the floor of the building of the original occupants is at least six feet or seven feet below the present level. Just below the present surface, inside and almost buried, are the remains of a Makalanga or Barotsi iron-smelting furnace.

ENSINDI RUINS

Situation.—On the Ensindi Kopjes, in the Gwanda district. These kopjes are often spoken of as the Cinder Kopjes, and are about one mile on the east side of the road leading from Bulawayo to the Mansimiyama store, on the highest point of a rugged ridge where the road passes through the nek. The ruins command an extensive view. The best approach is from the north.

Period.—First Zimbabwe period. Elliptical plan of building. Massive walls on rock formation.

OUTSIDE WALL WITH CHECK PATTERN, MEEWEE RUINS,
WEST GWANDA

INTERIOR VIEW SHEWING HERRING-BONE PATTERN,
MEEWEE RUINS, WEST GWANDA

Importance.—Minor.

Extent.—Ninety feet by fifty feet.

Ornamentation.—None visible in walls now standing.

Description.—Built of granite blocks. The building is laid out to suit the contour of the kopje, the front wall curving off at each end towards the back, which is formed by huge boulders which protect that side. The entrance is on the west side. Débris heaps are small.

Note.—A small ruin about five hundred yards to the east was probably built for a look-out or for a first line of defence.

Finds.—Gold-dust, copper beads, and pottery.

[There are several other undoubtedly ancient ruins in this district, some being of the first period, which are not described, particulars of which will be forwarded to the authors.]

CHAPTER XXI

RUINS IN GWELO DISTRICT

M'TELEGWA RUINS

Situation.

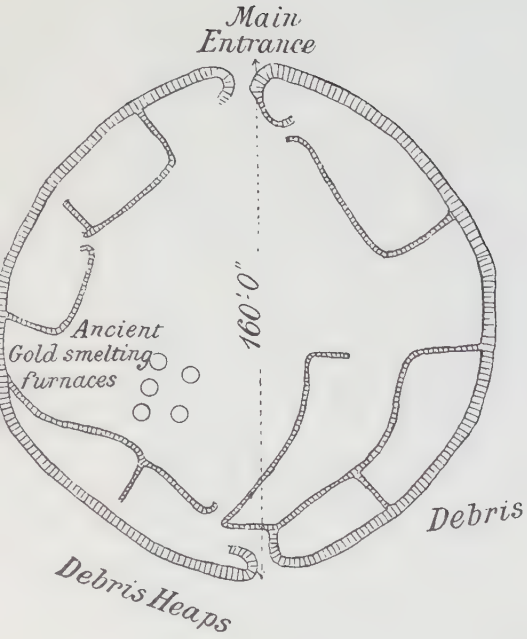
IN wooded country on a low granite kopje ten miles north-west of Thabas Imamba Ruins, in the M'Telegwa Hills, on the north bank of the Shanghani River, opposite its junction with the Longwe River.

Period.—These ruins evidently belong to the first Zimbabwe period. The masonry, both on the outside and inside walls, is of the best Zimbabwe workmanship; the main and divisional entrance walls are rounded; the batter of the walls is similar to that at Zimbabwe; the foundations are on formation rock, and are wide; and the walls are of massive character. Straight walls with angles are absent, and the rising-terrace system of building of the second period of Zimbabwe architecture is not present.

Importance.—These are important ruins, with at least six minor and dependent ruins surrounding them at distances of from seven hundred yards to three miles. These ruins evidently formed the gold-smelting centre for the district.

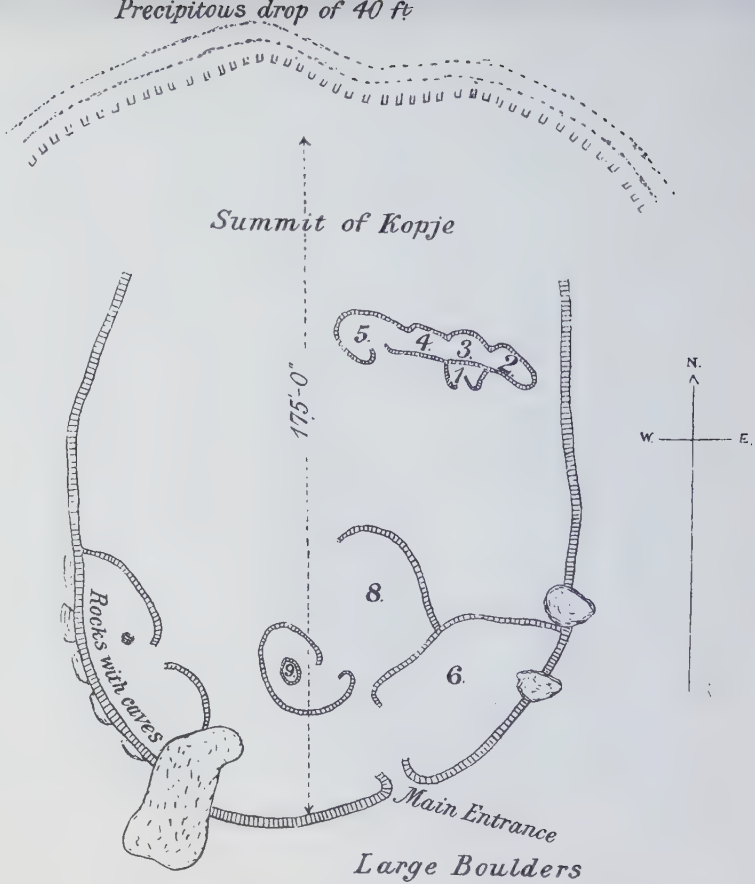
Extent.—The ruins cover an area of about two-thirds of an acre.

Construction.—The building is of granite blocks on the granite formation. The main outer wall is about five feet in thickness, the highest portion now standing being twelve



No 3 RUINS, MUNDIE RUINS, BELINGWE

(See p. 218)



MTELEGWA RUINS, BUBI-BEMBEZI DISTRICT

feet. The workmanship is of the best Zimbabwe style, and the courses are very true. The building is divided into nine inclosures, the inner walls being three feet six inches in width. The plan of the ruin is made to suit the contour of the summit of the kopje.

Ornamentation.—Herring-bone pattern on south side of the inner wall facing the main entrance, and is about seven feet in length, and commences and ends abruptly in the wall. No other Zimbabwe pattern is present in any of the walls now standing.

General description.—These ruins occupy the height of a kopje, and are guarded on the east, south, and west sides by massive walls, but on the north side they are naturally protected by a precipice which has a drop of forty feet. The main entrance is on the south side, and is rounded off, as are the ends of all the inner walls. On the south side the ground rises in a slight incline to the main entrance, and there are very large boulders scattered upon it, through which one has to zigzag to arrive at the main entrance. This is somewhat similar, though on a smaller scale, to what is seen at the approach to the Acropolis at the Great Zimbabwe. Evidently the main entrance was located to take advantage of the natural protection afforded by the boulders. From inside the main entrance the ground for a distance of one hundred and seventy-five feet rises to the summit of the kopje, which is forty feet higher than the entrance on the northern side of the inclosure, where it terminates at the edge of a precipice. On the inner divisional wall of No. 6 inclosure on the right-hand side of the entrance, and directly facing it, is the herring-bone pattern work before mentioned. Almost facing, but slightly to the left of the entrance, is an incomplete circular building (No. 9) with a diameter of sixteen feet, and inside this is a small, perfectly circular ruin about six feet in diameter, the wall of which is about two feet in height. The workmanship of this inner circular ruin,

unlike that of the main ruins, is decidedly of a much later period. To the right of No. 9 inclosure is another inclosure (No. 8) about seventeen feet in length, with walls about three feet in width. Turning to the left from the entrance inside the inclosure and past the huge boulder which forms part of the south wall is inclosure No. 7, which is about twenty-two feet long and eleven feet broad. This is built upon a naturally raised rock platform so high that it overlooks the other lower inclosures of the main ruins. On the west of the inside of this inclosure some rocks rise to a height of sixty feet, and within these rocks is a passage-way to several caves naturally lighted; and these caves show signs of having been occupied. The floors of the caves are made with the same cement as is used in Zimbabwe buildings. Near the summit of the kopje are five inclosures—Nos. 1, 2, 3, 4, and 5. Nos. 2, 3, 4, and 5 are connected by rounded entrances with each inclosure, but the only entrance for these is in No. 5, which stands on the highest ground. No. 1 is a separate inclosure on the south side of Nos. 3 and 4 inclosures. In No. 1 inclosure was found the skeleton remains, with bangles on which were stamped the old Zimbabwe herring-bone pattern.

General notes.—On making excavations in the chamber nearest the top of the hill (No. 5) a thorn tree with trunk measuring three feet in circumference fell over and exposed a skeleton and gold ornaments intermixed with the roots. Skeletons have been found in each of the inclosures of these ruins. It is believed that during the Mombo period these ruins were used as the burial-place for chiefs. The skeleton with the three pounds' weight of gold was buried inside the circular inclosure (No. 9), which was built in a poor imitation of Zimbabwe work of granite blocks taken from the surrounding walls.

In these ruins trees are forcing apart the walls, and have already done considerable damage.

Finds at M'Telegwa.—Zimbabwe periods. Gold bangle stamped with Zimbabwe herring-bone pattern. London jewellers have pronounced this bangle to be stamped on with one complete and perfect stamp. Many crucibles of the most ancient make showing visible gold in flux. Piece of thin beaten gold about six inches long and two inches wide, without pattern. This is pierced with holes in which were large solid gold tacks, weighing 3 dwts. each (present value 12*s.* each). Eleven caps of beaten gold with sun image embossed, one and a half inches in height and one and a half inches in diameter, with solid gold tacks. Two gold ferrules, six and eight inches long, tapering to a point, with solid gold tacks. Bottom portion of wooden pillow, the support of which was worked on both sides with three strands of gold wire into the Zimbabwe chevron pattern. The patterns on both sides were worked by the same wire passing through the wood. Jar of pottery sixteen inches in height, circumference at widest part twelve inches. The make of the jar is of the best Zimbabwe workmanship yet found in this country. It is also the only specimen in a complete state of preservation found up to this date. This was last in the possession of the Hon. Maurice Gifford. Three skeleton remains, each with an average of fourteen or fifteen ounces of gold in bangles and beads.

Monomotapa-Mombo period. Cloth interwoven with gold-wire thread in pattern.* This was found in No. 9 inclosure. In all probability cloth worked with gold thread was also worn by the ancients, as skeletal remains found in No. 9 inclosure were stated by natives to have been those of a chief of the Mombo period. There was buried with him three pounds' weight of solid gold jewellery. Five gold bangles, of Monomotapa period manufacture, were on each arm, each bangle weighing from 1 oz. to 1 oz. 15 dwts. Three

* Livio Sanuto, 1581, writing of Monomotapa, states: "The people wear clothing worked with gold thread."

hundred large gold beads, fifteen going to the ounce. The beads were made of gold strips with the ends hammered round to meet. Lumps of smelted copper. Gold-wire work plaited as if a mounting for a stick. These have also been found in other ruins. Other skeletal remains with copper ornaments and necklace of small gold beads.

THABAS IMAMBA RUINS*

Situation.—These ruins are on the north-west side of Thabas Imamba Range, and overlook Hartley Hill Road, which is only six hundred yards distant. The ruins are on the highest point of the range, commanding an extensive view of many miles, including the locations of the following ruins: M'Telegwa, Thabas I'hau, and Longwe.

Period.—First Zimbabwe period. These ruins are massive, with the first Zimbabwe period batter in both inside and outside of main walls, which are built in curved lines on rock foundation. There are no angular corners in the main walls. The rising-terrace style of architecture is not present. The workmanship is also of the first period. There are additions of the second, third, and fourth Zimbabwe periods, as at Khami and Dhlo-dhlo, etc.

Importance.—These are very important ruins. They evidently formed a large centre for the gold-smelting operations of the ancients, as portions of many thousands of gold crucibles and blow-pipes of the very oldest pattern, with gold still in the flux, were found under the present floors. There are indubitable evidences that a very great population resided at or near these ruins. King Mombo, in the Mombo period, lived here, and it was at these ruins that he was skinned alive by the Amaswazies.

Extent.—These ruins occupy an area of over two hundred feet by eighty feet.

* These are the Mombo, Momba, or Mamba Ruins (see earlier chapters).

Construction.—The ruins, which are on granite formation and are built of granite, completely cover a high kopje and are apparently built to suit the contour of the summit. The inclosures have been filled in with stones taken from the tops of the walls, as is the case at Dhlo-dhlo, Khami, and many other ruins. Owing to their being filled in it is extremely difficult to get an exact plan of the inclosures. The reoccupations, additions, and reconstructions point to the conclusion that the main ruin was partially destroyed to provide the material for later erections, and this accounts for the usual ornamentations in the main buildings being absent. The workmanship shown in the main building is excellent, and the courses are very true, there being no false courses introduced. The entrance walls are ruined, but judging by the architecture of the whole building, these were rounded, as in all ruins of the first Zimbabwe period.

Ornamentation.—No ornamentation is visible in the walls now standing. Most probably this existed, but owing to the vandalism of later occupiers and of amateur explorers, and also to natural causes, the ornamentation was destroyed.

General description.—There is only one accessible approach to these ruins, and this is on the south-east side. All the other sides are surrounded by precipices with sheer drops ranging from fifty feet to seventy feet. On all sides at the bottom of the precipices are huge débris heaps made of ashes, bones, broken pottery, etc., thrown over the edge, and to this day, with a dry separator, can be obtained portions of gold ornaments, gold pellets and tacks, copper, and pottery, both ancient and modern, of all periods of occupation.

A steep incline leads up to the main entrance, which is protected on the right-hand side by huge castellated boulders at least twenty feet high. Up against the boulder on the right-hand side of the entrance is a wall five feet in height and two feet six inches in width, which is built and

rounded off to meet the boulders and forms the right-hand side of a passage already explored to twenty feet, but which undoubtedly extends right into the building. Owing to the filling up of the ruins by the later occupiers it has not been traced further than twenty feet. The left-hand side of this passage is formed by another wall running parallel with the other wall, only without any boulder support on the outside. The passage, which is about two feet six inches in width throughout, is floored with granite blocks, which are again covered over with finest granite-powder cement. The flooring is in a splendid state of preservation. The walls of the passage were once higher, and the passage itself has been filled in to the general level of the upper floors and cemented over.

In the south-west corner of the ruins is an open space with cemented floor, protected by the steepest portion of the precipice and bounded on the north-east side by a wall twelve feet in height. This inclosure is approached by three steps down from the upper portion of the main ruin. At the top of these steps is another flight of over twelve steps ascending to the summit of a platform with cemented floor, which overlooks even the present filled-in floors of the rest of the buildings. This platform is the summit of what appears to be a solid cone, the base being about fourteen feet in diameter and the platform eight feet in diameter.

On the inside of the eastern main wall now standing, a divisional wall of a later period, and now only two feet high, runs with a curve towards the south in the interior of the ruins for about twenty-five feet. Inside the inclosure formed by this wall Messrs. Neal and Johnson removed the débris to the extent of twelve feet wide and three feet to nine feet deep. The débris was composed of ashes, bones, broken pottery of all periods, portions of gold and copper crucibles and blow-pipes, over which a cemented floor had been laid.

On the opposite side of this inclosure are two small com-

partments, the lower one being connected with the upper one by a short flight of steps. Each compartment is about eight feet in diameter.

General note.—Owing to the heavy nature of the work in getting down to the original floors, further exploration was not undertaken, especially as other unexplored ruins offered better facilities for examination.

Portions of the walls have, within the last five years, been destroyed in a most wilful manner by amateur explorers possessed of the idea that the walls contained treasure.

These ruins are particularly interesting for the following reasons:—

(1) They were the capital of the old Mombo kingdom, and—

(2) There are evidences that a vast population resided here during the Zimbabwe periods, and later.

THABAS I'HAU (HILL OF SHIELDS) RUINS

Situation.—These ruins are three miles south of Shanghani River and close to road leading from the Inyati Mission Station, *viâ* Bubi, Shanghani, and Gwelo, to Sinnanombi gold-belt, and are located on a high, precipitous kopje extremely difficult to ascend. The approach is from the north-west through a narrow pass two hundred yards in length, among huge boulders, with a sharp turning to the left. The climb is very steep. This ascent shows signs of occupation among the boulders, though there are no evidences of masonry. From the summit a view extending many miles in all directions can be obtained.

Period.—First Zimbabwe period. Walls massive, usual batter-back inside and outside of wall of first period, rounded entrances, foundations on bed-rock, plan irregular and built to suit contour of summit.

Importance.—These ruins, both on account of their size

and strategic position and of the gold-smelting operations carried on here, must have been of major importance.

Extent.—The ruins cover an area of half an acre.

Ornamentation.—None.

Description.—These ruins are built of granite blocks on the granite formation. There is only one entrance, and that is on the north-west side, and it has rounded walls. The walls, which are of good workmanship, are seven feet wide at bases, present reduced tops four feet wide, and highest parts about nine feet. Considerable portions of the walls have fallen on both sides of the walls. The building contains six inclosures, and also the usual courtyard, which is at the lower part of the summit. It is probable that the remains of a conical buttress and temple may be found when the inclosures are opened up. Very little exploration work has been carried on at these ruins.

Note.—The débris heaps are very extensive, and panning gave good returns.

These ruins do not appear to have been occupied by natives.

Finds.—Zimbabwe period. Gold beads, tacks, gold wire, beaten gold, gold pellets, and portions of gold crucibles.

LOWER LONGWE RUINS

Situation.—On a high and isolated kopje, which is well wooded, and is precipitous on its east side, and on the west bank of Longwe River, about three hundred yards from its junction with the Shanghani River.

Period.—First Zimbabwe period, with additions of second and later periods.

Importance.—Minor.

Extent.—One hundred and eighty feet by one hundred and fifty feet.

Ornamentation.—None in walls still standing.

Description.—Built of granite blocks on the granite formation. The walls, which extend round the summit of the hill, are four feet high and five feet wide at bases, and appear as if they had been reduced by later occupiers using the blocks for the erection of smaller buildings inside the inclosures. The main entrance is from the west, and has rounded walls. Some of the divisional walls also have rounded ends. Some of the interior divisional walls are of inferior workmanship, and their foundations are not on bed-rock. Two skeletal remains were discovered under a portion of the foundation, and these must have been buried before the wall was built. Fifteen skeletal remains were found.

Finds.—Zimbabwe periods. Pottery and gold-dust.

Later periods. Lumps of iron, iron spear-heads, picks, etc., in abundance.

UPPER LONGWE RUINS

Situation.—On west bank of Longwe River, three miles south from the Lower Longwe Ruins, on the west side of a high, isolated, rugged, and wooded kopje. The approach is from the south-west side of the kopje.

Period.—First Zimbabwe period. Plan of building elliptical. Walls massive, with rounded ends and of very good workmanship.

Importance.—Though very small ruins, these may have, perhaps, once had some little importance.

Ornamentation.—None now visible.

Extent.—About a third of an acre.

Description.—Built of granite on granite formation, and is in a very bad state of preservation, the ruins presenting the appearance of a chaotic mass of stones. The walls still stand four feet high. There are three inclosures. The entrance is on the south-west side. Débris heaps give evidences of first-period occupation.

Finds.—Zimbabwe periods. Skeletal remains with gold

beads of considerable size, two cakes of gold, gold tacks, portion of pillow worked with gold-wire chevron pattern on both sides, and ancient pottery.

Later periods. Copper beads, portions of copper bangles, etc.

COPPER RUINS

Situation.—Three hundred yards from the above junction of the Umvunga and Shanghani Rivers, on a low granite kopje in wooded country.

Period.—First Zimbabwe period. Plan of building elliptical. Walls massive, workmanship on inside and outside of main walls excellent. Evidences of reoccupation during later periods.

Importance.—During the first period these buildings must have been of considerable importance, as gold-smelting operations were then carried on.

Ornamentation.—None still existing.

Extent.—Forty-five feet or fifty feet by seventy feet.

Description.—Built of granite on the granite formation. Walls: width of bases, five feet, present height, seven feet, and width of present tops four feet. The main and only entrance is on the south-west side. There are five separate inclosures, with the usual courtyard, which takes up a space of a third of the interior of the building. Portions of the interior have been wholly or partially filled in during a later period.

Note.—The peculiar feature of these ruins is the evidence of most extensive copper-smelting operations having been carried on, tons of copper slag, pieces of copper, blow-pipes with copper stains, and portions of copper crucibles lying in and about the ruins. It is not known where the copper was obtained, possibly in the district, which so far has not been prospected. No other ruin in Rhodesia shows such a vast quantity of copper-smelting remains.

Finds.—Zimbabwe periods. Gold beads, gold tacks, gold pellets, and gold-dust.

Later periods. Copper crucibles, blow-pipes, pieces of copper, copper bangles, etc.

UMVUNGA RUINS

Situation.—On a granite kopje on the south bank of the Umvunga River, nine miles up the river from the Hartley Hill road drift. The best approaches are from the south and west.

Period.—First Zimbabwe period. Plan of building elliptical. Massive walls, workmanship excellent, foundations on rock, entrance walls rounded, inside of walls well built and battered.

Importance.—Minor.

Ornamentation.—None.

Extent.—Ninety feet by eighty feet. No traces of this building having been larger.

Description.—Width of bases of walls five feet, at present reduced top three feet six inches, and average height five feet. Built of granite blocks. There are three inclosures and a courtyard. The main entrance is on the south-east side and has rounded walls. No traces of steps. Débris heaps.

Note.—These ruins have not been explored. Pannings showed fine gold-dust. Pottery of all periods was found.

LITTLE UMVUNGA RUINS

Situation.—On a small granite kopje commanding a good view of the Umvunga River Valley, and in well-wooded country and in sight of the M'Telegwa Ruins, which are five miles to the south, and close to a small running stream which flows into the Umvunga River. The best approach

to these ruins is from the Lower Shanghani-Gwelo road, which is three miles to the west.

Period.—First Zimbabwe period. Plan of building elliptical. Massive walls on rock foundation, usual first-period batter, excellent workmanship inside and outside of main walls, and entrance has rounded walls.

Importance.—It is probable, owing to the "finds," that at these ruins gold-smelting operations were carried on.

Extent.—About fifty feet by forty feet. No evidence of their having once been larger.

Ornamentation.—None now existing.

Description.—Built of granite blocks. Width of walls at bases five feet, at present tops three feet six inches, and highest portion seven feet. There are two inclosures. The entrance is on the south-east side and has rounded walls; no trace of steps. Débris heaps.

Finds.—Zimbabwe periods. Gold beads, gold pellets, fine gold-dust, pottery, etc.

LITTLE M'TELEGWA RUINS

Situation.—Three miles due east of the M'Telegwa Ruins, on a small stream running into the Umvunga River, on a bold granite bluff overlooking the surrounding country. The best approach is from the west.

Period.—First Zimbabwe period. Plan of building elliptical. Walls massive, with excellent workmanship and usual first-period batter on both sides, foundations on rock, and rounded entrances.

Importance.—The exceptionally massive character of these ruins suggests that, though not of major importance, they were of more than ordinary minor importance. So far no remains either of temple or gold-smelting operations have been discovered.

Extent.—About fifty feet by forty feet.

Ornamentation.—None.

Description.—Built of granite blocks. Walls at bases twelve feet wide, present tops five feet wide, highest portion of the walls fourteen feet. The main entrance is on the north-east side of the building. There are no traces of any steps. There are three inclosures which have been filled in, probably with stones taken from the south wall, which is open ; also a filled-in buttress similar to the one at the Ingangase Ruins.

Finds.—Fine gold, copper beads, wire, and pieces of copper.

BEMBEZWAAN RUINS

Situation.—On a low granite kopje, somewhat obscured by the wooded nature of the country, about midway between the Sebakwe and Bembezwaan Rivers and three miles above their junction. The best approach is from the Chicago-Gaika Mine, taking a north-easterly direction and crossing the Bembezwaan River about a mile above the junction.

Period.—First Zimbabwe period. Plan of building elliptical. Both sides of walls are well built and have the usual first-period batter. Foundations on rock.

Importance.—Minor.

Ornamentation.—None.

Extent.—Sixty-five feet by thirty-five feet.

Description.—Built of granite blocks. Width of base of walls about five feet, at present tops three feet six inches, and average height five feet. There are three inclosures and a courtyard. The entrance is on the south-east side.

Note.—The building has not been filled in, but has been occupied at different periods. The Portuguese fort is below the junction of the Bembezwaan and Sebakwe Rivers, four and a half miles from this ruin.

Finds.—No exploration work has been done here, but pannings showed fine gold. Pottery of all periods, also copper wire and beads were found.

SEBAKWE-UMNYATI RUINS

Situation.—These two distinct ruins are situated on two prominent kopjes near the junction of the Sebakwe and Umnyati Rivers, in the Gwelo district. The two sets of ruins face one another at a distance of about three hundred yards. A small stream of water flows between them. The country is thickly wooded and rugged. A splendid view of the surrounding country is obtained from both of these ruins. The best approach is from the south-west.

Period.—First Zimbabwe period. Plan of building elliptical. Walls massive, batter-back and best workmanship both on inside and outside faces of walls, foundations on rock.

Importance.—Minor.

Ornamentation.—On the north-eastern side of the ruin, which is nearer the Umnyati River, there is check pattern about ten feet long and about four feet above present floors, and faces north-east.

Description.—Built of granite on granite formation. Width of walls at base six feet, and at present tops three feet six inches, with an average height of six feet. The north-eastern ruin has four inclosures and is sixty feet by forty-five feet. The south-western ruin has three inclosures and is forty-five feet by forty feet. No entrances can be located owing to the damaged state of the walls.

Note.—No exploration work has been done here, but a few pannings from each débris heap showed fine gold.

JOMBI RUINS

Situation.—On a low granite kopje in well-timbered country at the junction of the Jombi and Umnyati Rivers. The best approach is from the west.

Period.—First Zimbabwe period. Plan of building ellip-

tical. Excellent workmanship, rounded entrances, foundations on rock.

Importance.—Minor.

Ornamentation.—None.

Extent.—Forty-five feet by forty feet.

Description.—Width of walls at base four feet, at present tops three feet, extreme height five feet, and built of granite blocks. There are three inclosures and the usual courtyard. The entrance is on the north-east side. This ruin has not been filled in by later occupiers.

Finds.—Gold-dust and pottery of all periods.

TAGATI RUINS

Situation.—This group of over twenty detached ruins is near to the Tegati Hills, on high diorite kopjes, seven miles north-west of Gwelo as the crow flies.

Period.—Some of these distinct ruins are undoubtedly of the first period, while others are of the second period, with additions of later periods.

Importance.—These ruins, from their number, size, and area covered, were of considerable importance. This was also a gold-smelting centre of the ancients.

Extent.—These more than twenty distinct ruins cover an area of at least one and a half square miles.

Ornamentation.—None, owing to great reduction in heights of walls and no exploration work having been done in the interiors of the buildings.

Description.—In the ruins of the first period the walls are massive and well built, and the entrances rounded. In the ruins of the second period the walls are not massive, but are roughly built, and have squared ends. The present height of walls averages five feet, while the highest wall is seven feet. Each ruin has several inclosures, varying in numbers from three to seven. Steps were only found at

one ruin. The largest and best ruin of this group is at the summit of the hill, and its measurements are roughly about one hundred and fifty feet by seventy-five feet. No inclosures can be seen in this ruin owing to the filling up during a later period. Diorite blocks have been used in all the buildings. Débris heaps extensive.

Finds. — Zimbabwe periods. Portions of ancient gold crucibles, gold beads, gold tacks, gold pellets, and fine gold-dust and pottery. In one small inclosure gold-dust was plentiful.

Later periods. Copper, copper beads, and wire and pottery.

UMTELEKWE RUINS

Situation.—These ruins are on a high granite dyke or protrusion out of the surrounding country rock, on the north-east side of a range of hills on the south bank of the Umtelekwe River, and three miles south-east of the Mac-a-Mac Reef. The best approach is from the north-west up a very rugged and steep incline.

Period.—First Zimbabwe period. Elliptical plan of building, massive walls, excellent workmanship, also batter on both sides of main walls, and foundations on rock.

Importance.—No exploration work having been carried on here it is impossible to state whether these ruins have either temple remains or evidence of gold-smelting operations.

Ornamentation.—Herring-bone pattern for about five feet on the outside of the north-west wall.

Extent.—About sixty feet by forty feet.

Description.—The height of the present tops of walls is, roughly speaking, about eight feet. Walls at base five feet to six feet in width, at tops three feet six inches. These buildings have not been filled in, and several inclosures can be traced. The entrance is on the south-east side.

CHAPTER XXII

TATI AND NORTH BECHUANALAND GROUP OF RUINS

TATI RUINS

THESE are situated near Ramakubama River (Tati Concessions Territory), south of Francistown and north of Old Tati, about nine miles on the east side of the old road north. The walls show herring-bone pattern on the outside and nearer the base of the walls than is usual. The wall on one side is down. Zimbabwe architecture and plan of building and construction. There are also ruins of a higher building within the elliptical circle. Dr. Robert Moffat refers to this ruin and speaks of the vandalism of transport-riders in destroying the walls, but he gives no description of the ruins. Dr. Holub states that each of the inclosures has an entrance facing north. Mr. G. Phillips states that the walls of these ruins are exceptionally massive, while Mr. Maund says the walls are twelve feet to fifteen feet wide, and that the entrance is so narrow that only one person at a time could pass. An engraving in Dr. E. Mohr's work shows herring-bone pattern on the inside of main walls, the inner face of which appears to be well built. This ruin is described by Dr. Holub and Mr. E. A. Maund and mentioned by Mr. Bent and others.

SEMALALI RUINS

Four distinct sets of ruins near Semalali. The radii of curves in these buildings were fixed by Mr. Swan. The four buildings are of the original Zimbabwe plan and construction. Mentioned by Messrs. Bent and Swan and early writers.

IMPAKWE RUINS

These ruins are fifty yards from the Impakwe River, in the Tuli district. The Impakwe is a tributary of Limpopo River. Zimbabwe plan and construction. Herring-bone pattern low down on the walls. The walls and foundations show an octagonal plan of building. Mr. Bent found no evidences of any temple at these ruins. Dr. Moffat and Mr. E. A. Maund give descriptions of these ruins, and they are mentioned by Mr. Bent and other writers.

SHASHI RUINS

These ruins are on the Shashi River and are described by Dr. Holub in *Seven Years in South Africa*, also by Mr. Bent.

MACLOUTSIE RUINS

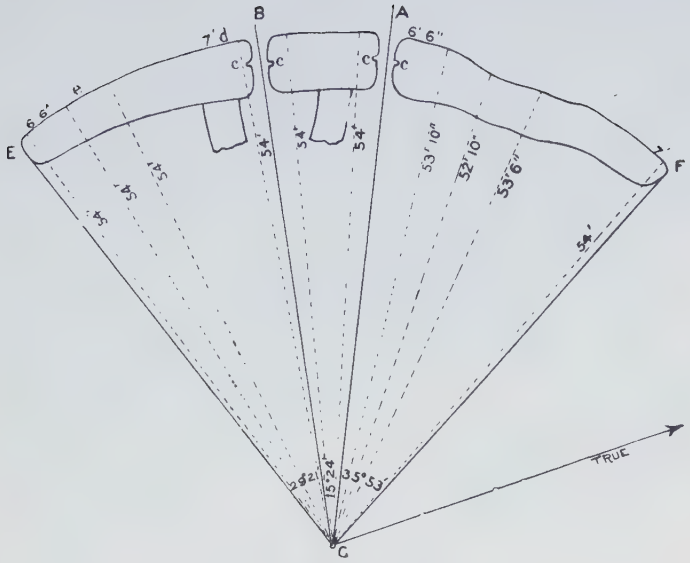
The Macloutsie Ruins are close to old camp. The radii of curves were fixed by Mr. Swan. Plan and construction are of original Zimbabwe style. Described by Mr. Bent, and early pioneers.

MACLOUTSIE AND LOTIAKANA RUINS

On the south bank of the Macloutsie River, a quarter of a mile below its junction with the Lotiakana River. This building is of the oldest Zimbabwe period. No decoration visible, as the walls are now only about four feet high. The plan is elliptical.

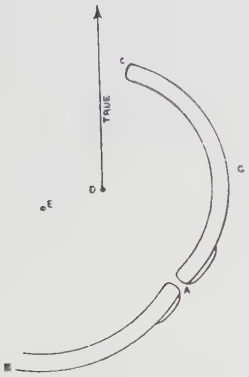
LIPOKOLI RUINS

In Lipokoli Hills, ten to twelve miles north of Macloutsie River. These are two distinct sets of ruins of the first Zimbabwe period architecture and construction. No temple remains have been discovered here. These ruins are referred to by Mr. Bent, and described and photographed by members of the 1890 Pioneer Column.



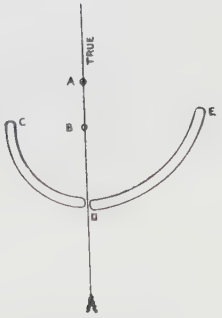
LOTSANI RUINS

SCALE: 1 IN. TO 20 FT.



MACLOULSIE RUINS

SCALE: 1 IN. TO 40 FT.



SEMALILI RUINS

SCALE: 1 IN. TO 40 FT.

BAOBAB KOP RUINS

These ruins are on Baobab Kop, north of the Lipokoli Hills and about eight miles south of the junction of the Shashani and Shashi rivers and near the telegraph route between Macloutsie and Tuli.

LOTSANI-LIMPOPO RUINS

Near the junction of Lotsani and Limpopo Rivers. These ruins comprise two distinct sets of buildings. Messrs. Bent and Swan state that both these ruins are "orientated towards the setting sun." All the characteristics of the first Zimbabwe period architecture are present here, including the battering back on both sides of main walls, which have rounded ends and are built in very regular courses. The holes in side walls of the doorways, similar to those at Zimbabwe, are now thought to have been made during a later period. These ruins are mentioned by Mr. Bent, and are described by early pioneers.

SELKIRK RUIN

Mr. R. C. Dowie, of Bulawayo, reports an ancient wall on the Selkirk property in Tati Concessions. The wall is built against a slight eminence. There is little of it left, and the stones have no pattern. He says, "It is just a piece of plain stonework similar to that of many ancient ruins, but still it is interesting, as being perhaps the remains of a fort whence watch could be kept over the surrounding country."

This ruined wall is in close proximity to an ancient copper mine.

Almost all the ruins in the Tati and Bechuanaland group are believed to have been erected during the first or earliest Zimbabwe period, and *these all lack any of the evidences of second-period architecture. In none of the ruins are*

there any terraced buildings. The only ruins which may not belong to the first period are those of Impakwe, which some consider to have been of much later date.

The ruins of this group have been so often described that it would be tedious reading were all full details to be set forth, especially as no one of these ruins presents any striking peculiarity, all features being represented in a description of any ruin of the first Zimbabwe period.

Reports as to the discovery of several portions of ancient walls in different localities in the Tati Concession are to hand, while the fact of their existence in the Transvaal Colony, north of Murchison Range, has been established by writers and prospectors.

CHAPTER XXIII

RUINS IN MATABELELAND LOCATED BUT NOT DESCRIBED

MULLINS' RUINS

SITUATED about four miles west of the head-waters of the Jombi River, in the Mafungabusi district. These comprise four different sets of very important and extensive ruins covering a large area. Gold beads have been found here.

BILI RUINS

These ruins are on the summit of Samagaschwia Hill, near Bili's old kraal, in the Mafungabusi district. These ruins cover a very large area of ground, and evidently were of considerable importance.

PONGO RUINS

On the Pongo River, six miles south of Shanghani River and about two miles east of the new railway. These form a group of three or four distinct ruins. The walls are down, but foundations can be traced. There are several other groups of ruins in this district.

MORVEN RUINS

Situated one and a quarter miles east of Morven Mine. Walls remaining are six feet to seven feet wide and five feet to six feet high. Boulders have been utilised in the construction. Very little of the ruin remains. In this locality

are extensive ancient workings, and hundreds of ancient crushing-stones are to be found here.

DAWNEY RUINS

These ruins are sixty miles due west of Bulawayo, and are mentioned by Mr. Thomas Baines to have been discovered by the Hon. Mr. Dawney, who at that time published descriptions of them. These ruins are also spoken of as the Upper Gwaai Ruins, but they lie to the west of that river.

PANDA-MA-TENKA RUINS

These are important ruins near the source of the Natetsi River, in Wankie's district and near the old Zambesi road from Tati. The measurements of these ruins were supplied to the Hon. Maurice Gifford. Photographs of these ruins show Zimbabwe construction, though some writers have suggested that they were of later date.

DAKA RUINS

Situated in Wankie's district, and are three miles east of the Daka River on the footpath from Wankie's to Panda-ma-tenka. Particulars of these ruins were supplied to the Ancient Ruins Company, Ltd., but appear to have been lost.

WANKIE RUINS

Several sets of ruins are reported by Mr. Price (Messrs. Forster, Browne, and Rees' representative). These are on and near the coal area at Wankie's, owned by the Wankie (Rhodesia) Coal, Railway, and Exploration Company, Ltd., but no definite particulars of these ruins are to hand.

LOWER SHANGHANI RUINS

These ruins are on the Lower Shanghani River, a few miles to the west of where Major Alan Wilson's party made their last stand.

DAKA RUINS WANKIE'S DISTRICT

BULALEMA RUINS

In the Bulalema district are ruins evidently possessing features of the second period of Zimbabwe architecture, and are built on the rising-terrace principle. They are near the L.M.S. missionary station at Bulalema.

FIG TREE RUINS

On Simpson's farm, about three miles west of Fig Tree old store and one and a half miles from Simpson's homestead, on granite kopjes.

RUINS (NORTH MATOPPAS)

On the north side of the Matoppa Range are several ancient ruins of small size, placed as if to protect the gorges into the hills. Several are altogether hidden by trees and may be passed close to without their being discovered. There is also a small ruin on Sauerdale, and one on the Happy Valley farm close to Mr. Van Rensburg's homestead. But this latter ruin is at present difficult of classification. It is highly probable that more ruins will yet be found on the northern side of the range.

UMVUTCHA RUIN

In the Umvutcha district, near Bulawayo, to the west of the Umvutcha Kraal. This ruin, which has check pattern, was described in one of the earliest papers published in Bulawayo. Probably this ruin was one of the minor forts dependent upon the Khami Ruins.

LOWER KHAMI RUINS

Ancient ruins, with check pattern, are reported to be five miles lower down the river than the main Khami Ruins. These are known to exist, but no descriptions are to hand.

RUINED WALL NEAR CHRISTMAS REEF

On the Tuli road and about two or three hundred yards on one side, just before arriving at Christmas Reef from Bulawayo, are the foundations of a ruined wall built of granite blocks on the Zimbabwe style. These foundations have been practically covered over with silted soil, and small trees and bushes completely hide them. One has to creep under low branches to get to the wall.

TULIKA RUINS

In South Belingwe, three miles north of Ihuzi Ruins. Induna of the district is Banhwe, who lives two miles to the east of these ruins.

UMSIMBETSE RUINS

In South Belingwe district, fifteen miles south of Ihuzi Ruins, on a granite kopje. Usitandzie is six miles south of these ruins.

UMRONGWE RUINS

In North Belingwe, six miles north-east of Burangwe Ruins, on Umrongwe spruit, running into Ingazie River.

KULUKULU RUINS

In North Belingwe, thirty miles south-east of N'Natali Ruins.

MASUNDA RUINS

In North Belingwe, between the Sabi and Lundi rivers, about eight miles south of M'Badzulu Ruins.

M'BADZULU RUINS

In North Belingwe, about ten miles south of Chugwa Ruins.

CHUGWA RUINS

In North Belingwe, three miles west of Lundi River and ten miles north of M'Badzulu Ruins.

GATLING HILL RUINS

Three miles west of Gatling Hill Mine, on the edge of the granite formation.

SINANOMBI RUINS

On the Umgwenia River, near Northallerton Mine, Gwelo district. Large ruins in good state of preservation. Probably important. Walls about ten feet high. Elliptical plan. Herring-bone pattern.

GWADALOWAYO RUINS

Near Etal Reef, Filabusi district.

"B.-P." RUINS

On the summit of a range of kopjes on the left-hand side of road leading from Filabusi Fort to the "B.-P." Reef. Diameter seventy feet, walls four feet to five feet in width, present height six feet. Well built, slate slabs, no ornamentation, and entrance on the north-east side.

REGINA RUINS

These ruins are situated three hundred yards north of Meikle's store, on the Insiza and Belingwe road, and a few miles south of the Mudnezero Ruins, in the Upper Insiza district. In 1894 they were examined by Dr. Hans Sauer, Captain Sampson, and Mr. Bradley, and a description was given in the *Bulawayo Chronicle.* The plan is elliptical, being at the widest points three hundred feet by two hundred feet. There are six tiers of terraces. There are several cellar-like holes under the floors of these buildings (see *Cellars* in Chapter xii. For finds see Chapter xi.).

SHEBONA RUINS

To the north of Fort Rixon and Dhlo-dhlo Ruins, in the Upper Insiza district.

LOBELA RUINS

These ruins are situated about equal distance from Dhlodhlo Ruins, Choko Ruins, and Mudnezero Ruins, in the Upper Insiza district.

DECHOW RUINS

Thirteen miles E.N.E. of the queen's kraal, in the Bembesi district, on the right of the Zambesi road. Visitors should take the road from the queen's kraal to Chubichubi's kraal for ten miles, and then go due north for six miles. The ruins cover an area of half an acre. There is no ornamentation. The plan is elliptical, and the highest portion of the walls now standing is about seven feet. Scores of ancient crushing-stones have been found in a creek near these ruins.

Note.—There are at least twenty other ancient ruins of the first-period type in Matabeleland which are known to be of the oldest Zimbabwe architecture, beyond those described or located, and particulars of these will be given by the authors in a future edition.

Further, several other ancient ruins in Matabeleland, not described or located in this work, were reported to the "Rhodesia Ancient Ruins Company, Ltd.," but all records of locations, measurements, and other details have been lost, as the authors, on searching the papers of this company, failed to trace any notes concerning them, notwithstanding that Mr. Neal was acquainted with the fact that they had been so reported.

CHAPTER XXIV

RUINS IN MASHONALAND

M'TENDELE RUINS

SEVERAL writers give the name of "Matindela" to these ruins. This is incorrect, their proper name being M'Tendele, or Guinea-fowl, as these birds abound in this district.

Situation.—Approximately 19° 30′ 23″ latitude and 31° 51′ 45″ longitude, and about 3,350 feet above sea-level. The ruins are built upon a bare granite rock about a hundred and fifty feet high and occupy a strong strategic position. They are situated in Nyasando's country, Charter district, twenty miles due west from the Sabi River, ten miles north-east of Mount Eveta, nine miles south of the curiously shaped Chiburwe Mountain (1,000 feet), and fourteen miles south of the Zeeri River Ruins.

Period.— Present building, but not the foundations, is believed to be of a much later period than that of the Great Zimbabwe. The foundations are evidently of the first Zimbabwe period, and are laid upon an elliptical plan, and are very massive. The walls give every evidence of the second-period architecture, including rough masonry, irregular courses, straight entrance walls, and practically plumb faces. Mr. Bent is of opinion that the foundations were built by the same race as the builders of the original portions of the Great Zimbabwe, only that the superstructure was erected during a period of decadence (see *Periods*, Chapter xii.).

Importance.—These are very important ruins, with temple remains, and were the chief or capital centre for a very large district which contains numerous minor ruins.

Extent.—Two hundred and twenty feet by one hundred and eighty feet. Judging by the numerous traces of foundations outside the ruins, the buildings were in all probability once very much larger.

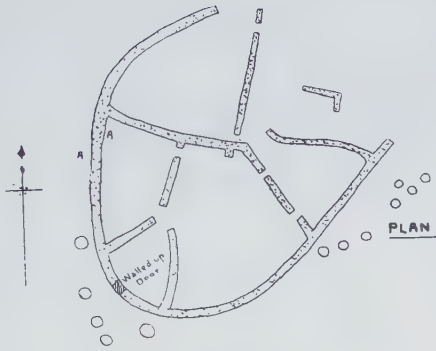
Orientation.—The general aspect of the decorated part of the building is toward the setting sun. Mr. Swan does not place much reliance on the particular orientation of the present building, which he believes is but a reconstruction at a late period* and a rough copy of the older structure. He also states: "The direction of the doorways also seems to have some meaning, for three of them look east 25° north, and four east 25° south, thus corresponding to the direction of the sun rising and setting at the solstices."

Ornamentation.—On the outside of the western wall, and facing the setting sun at the summer solstice, is herring-bone pattern extending six feet above the entrance, also herring-bone pattern for a length of forty feet facing the setting sun at the winter solstice, while a dentelle pattern faces the W.N.W., being two courses lower in the wall than the herring-bone pattern above the entrance. Herring-bone pattern in two lengths, one being thirteen feet, are on the inside wall of one of the western inclosures and face the rising sun at the summer solstice.

Description.—These are very fine ruins, but altogether inferior to Zimbabwe.

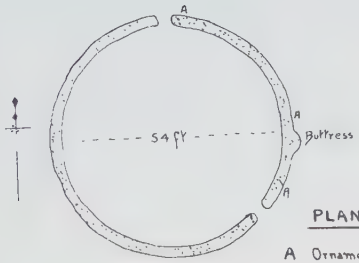
The building is of granite blocks, believed to have been quarried from two depressions on the eastern side of the hill. The main walls on the south-east side are eleven feet six inches wide at bases, and still stand about fifteen feet high. The main entrance faces W.S.W. and has square walls with stone wall carried over it. The entrance was

* Dr. Schlichter makes a similar remark with regard to Dhlo-dhlo ruins.



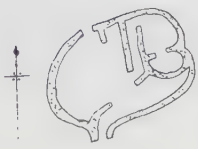
PLAN OF M'TENDELE RUINS

Area 220ft. X180ft.
A. Ornamentation
O. Circular Foundations



PLAN OF LUNDI RUINS.

A Ornamentation :- Herring bone & Check patterns



PLAN OF LITTLE ZIMBABWE.

Rob Adamson

originally seventy feet wide, but has been narrowed on each side by walls two feet wide; and this narrowed entrance has again been completely built up, and evidently was not walled up in any haste. Mr. Bent (p. 138) suggests a possible connection with the walling up of the pylons of certain Egyptian temples in the Karnak. The building is perfectly open for a length of one hundred and twenty feet on the north-east side. There are six inclosures to be seen still remaining. The divisional walls are laid on comparatively straight lines, and all the internal entrances are squared. There is a loophole in the main wall above the south-west entrance, only a few feet more towards the north, which Mr. Bent suggests was for admitting rays of light into the temple inclosure for astronomical purposes. There are holes in the tops of the walls, evidently for the purpose of letting in monoliths, as at Zimbabwe and other ruins. On the inside of the front part of the wall is a banquette or terrace three feet shorter than the front part of the walls. This resembles the banquette work at N'Natali Ruins. Outside the main walls are many circular foundations built of granite blocks and varying in diameter from six to fifteen feet. These are built in groups, and resemble the small circular buildings to be found at M'Telegwa, Bochwa, Zimbabwe, and other ruins. Over a dozen giant baobab trees are standing within these ruins and doing very considerable harm to the walls. The presence of these trees shows that the ruins could not have been occupied for many centuries.

ZEERI RIVER RUINS

These ruins, which are often spoken of as the Chiburwe Ruins, are on the Zeeri River, fifteen miles north-west from Sabi River, in the Charter district. This is an elliptical fort forty feet in diameter, built in good Zimbabwe style. Gigantic baobab trees are damaging the walls.

CHILONGA RUINS

In Nyasando's country, Charter district, eight miles south of M'Tendele Ruins.

METERNE RUINS

Ten miles north-west of Kutiarngi's kraal, and three or four miles from Mount Eveta, and not far from Lutilo Mountain. These ruins are built on the top of a rounded granite hill and comprise three circular buildings. The walls are hopelessly ruined.

Chain of forts.—The ruins of M'Tendele, Zeeri River, Chilonga, and Meterne form a group all within fifteen miles of each other. Several archæologists presume them to be a chain of forts, not temples, protecting an ancient trade route going north-east.

UMNYATI RUINS

Near Umnyati posting-station, eight miles south of Charter, on the Victoria Road.

LUNDI RUINS

Situation.—On a granite eminence five hundred yards on the left bank of the Lundi River, within two miles of Lundi posting-station, on the old Pioneer Road to Salisbury. The ruins are situated in a very picturesque locality, with high and rugged kopjes and wooded flats. The district is thickly populated.

Period.—This is a circular ruin, and Messrs. Bent and Swan believe that the circular buildings are those of a later date of Zimbabwe architecture than those which are built upon an elliptical plan or laid on a system of curves (see *Periods*, Chapter xii.).

Importance.—Though a small building, it was probably used both as fort and temple. The strategic position of the ruin near a drift, and protecting the route westward through the kopjes in this district, suggest a fort, while Major Condor, the Palestine and Arabian archæologist, together with Messrs. Bent and Swan and others, affirm it was once used as a temple.

Extent.—The building has a diameter of fifty-four feet.

Ornamentation.—The ornamentations are on the eastern side, and consist of two rows of one side only of herring-bone, and two rows of check patterns. The check pattern is near the present top of the wall and the herring-bone is underneath it.

Orientation. — Messrs. Bent and Swan state that "the patterns face the rising sun at the winter solstice. Nearly facing the rising sun at the equinox is a curious bulge (outwards) for about two feet constructed in the wall. At this bulge the two lower rows of ornamentation terminate, but the upper one is carried on round as far as the south-eastern entrance. There can be little doubt that these patterns, found on nearly all the Mashonaland ruins, were constructed for a purpose; they only go round a portion of the buildings; they have always the same aspect, namely, south-east, and one cannot dissociate these circular buildings and the patterns from some form of sun-worship."

Major Condor says, "The circle is a sacred inclosure, without which the Arab still stands with his face to the rising sun."

The buttress or bulging out on north-east side might have answered the same purposes as the conical buttresses at Zimbabwe (Acropolis), Chum, Umnukwana, Ingangase, Little M'Telegwa, and other ruins.

Description.—The walls, which are on formation rock, have a base five feet wide, and the highest point now standing is about nine feet. The workmanship is good. The lowest

courses of the walls are made of very large blocks of granite of irregular shape, and seem to be the largest stones used in any buildings. The interior is divided into inclosures, the divisional walls being laid on straighter lines than the divisional walls at Zimbabwe. There are two entrances, one facing the north and one the south-east, and each has squared walls. The south-eastern entrance has been built during a later portion of the period in which the building was erected, as the workmanship is equally as good and is identical in character. The floors are cemented in the usual Zimbabwe style.

Note.—Messrs. Neal and Johnson examined this ruin in 1895, spending one week in the work.

Finds.—Small quantity of gold-dust, copper beads, glazed pottery.

LOWER LUNDI RUINS

Situation.—Fifteen miles east of Lundi posting-station, on the south bank of the Lundi River.

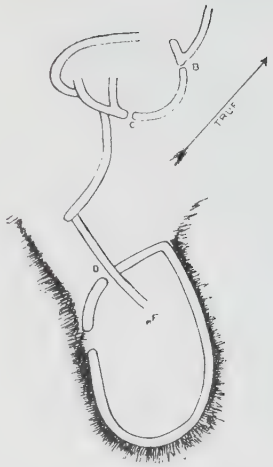
Description.—This is a circular ruin, very similar to the Lundi Ruins. It is divided into three inclosures, which have been filled in to the level of the present tops of the walls. Ten feet of herring-bone pattern extend on the outside of the south-eastern wall.

MABETSA RUINS

On Mabetsa range of kopjes on the east side of Lundi River.

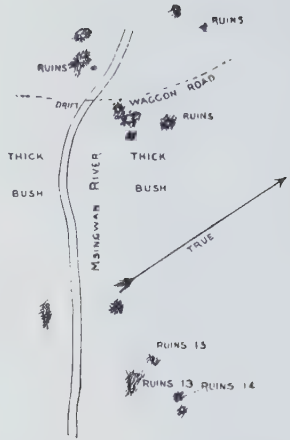
UMZINGWANI RUINS

These consist of a chain of seven distinct ruins along the Umzingwani River, near the old Pioneer Road to Victoria. Three of these are built in the best Zimbabwe period style on elliptical plans.



No. 5 RUINS (MOST EASTERLY) OF THIS CHAIN ON UMZINGWANI RIVER

SCALE: 1 IN. TO 80 FT.



UMZINGWANI CHAIN OF RUINS

LITTLE ZIMBABWE RUINS

This ruin occupies a position in the centre of a fertile valley eight miles south-east from Zimbabwe, and is built on a flat granite rock. It is built upon a plan of curves, and has five inclosures. The entrances are on the north and S.S.W. sides. It has a diameter of between sixty feet and seventy feet. Its construction is as intricate as at Great Zimbabwe, but is believed to be of later date, with irregular stones and courses.

MELSETTER RUINS AND MONOLITHS

These ruins are now scarcely noticeable, owing to their dilapidation. They are situated four miles east of a point on the Melsetter and Umtali telegraph route, about twelve miles north of Melsetter.

UMTELEKWE (SABI) RUINS

These are large and important ruins, situated on the east bank of the Sabi River, in the Melsetter district. These ruins have no less than nineteen inclosures, of which several have been filled in to a height of fifteen feet. The most extraordinary features in these ruins are the narrow passages which run from end to end of the building. The walls are massive and are built upon a curved plan throughout, the highest portion of the wall now standing being fifteen feet high. Herring-bone pattern, ten feet in length, is on an inside wall facing the west. The entrances are on the S.S.E. and south sides. The finds included gold beads, pieces of gold wire, and portions of the best Zimbabwe pottery. There are two rounded walls with granite steps leading to the summits (see *Cones* and *Buttresses*, Chapter xii.).

SOVEREIGN No. 1 RUINS

Situation.—On prominent kopje on the north bank of the Umnyati River, five and a half miles north-east of the Sovereign Reef, in the Hartley Hill district. The best approach is from the south.

Period.—First Zimbabwe period. Elliptical plan of building. Walls fairly massive, with usual batter and good workmanship on both sides of walls. Foundations follow surface outline of rock.

Importance.—Minor.

Ornamentation.—None.

Extent.—Fifty feet by forty-five feet.

Description.—Built of both basaltic and granite blocks. Width of walls at base four feet six inches, at present tops three feet, and highest portion eight feet. There are four inclosures, the side of the courtyard being open on the north-east side for a space of twenty feet. Débris heaps.

Finds.—Gold-dust, copper beads and wire, and old and comparatively modern pottery.

SOVEREIGN No. 2 RUINS

Situation.—On a fairly prominent whale-back kopje on the north bank of the Umnyati River, four miles north-east of the Sovereign Reef, in the Hartley Hill district. The ruins are some three hundred yards from the river on the south side. The best approach is from the south.

Period.—First Zimbabwe period. Plan of building elliptical. Wall massive, with batter-back on both inner and outer sides ; workmanship good, though material poor.

Importance.—Minor.

Ornamentatian.—None.

Extent.—Sixty feet by twenty-five feet.

Description.—Built of basaltic blocks on basaltic forma-

tion. Walls five feet wide at base, three feet wide at present tops, and height six feet. Three inclosures with courtyard. Entrance on the south-east side. Débris heaps.

Finds.—Gold-dust, copper beads and wire, and old and comparatively modern pottery.

YELLOW JACKET RUINS

Situation.—Four miles east of the Yellow Jacket Reef, Mazoe district, on the east bank of a running stream, tributary of the Mazoe River, on a low granite kopje.

Period.—Believed to belong to first Zimbabwe period. Elliptical plan of building, foundations on bed-rock, excellent workmanship, true courses and batter-back on both sides of walls.

Importance.—Minor. No traces of gold-smelting operations or temple remains discovered.

Extent.—Thirty feet in diameter.

Ornamentation.—None in walls now standing.

Description.—Width of walls at base between four and five feet, at present tops three feet, height of walls still standing six feet. The débris heaps are small. Gold-dust obtainable by panning the soil. Pottery of all Zimbabwe periods.

Note.—These ruins were discovered in May, 1891, by Mr. Neal. Mr. Bent, who was Mr. Neal's guest, subsequently visited and described them.

POSTI RUINS

Close to the east side of Posti River, a tributary of the Mazoe River, twenty-five miles north of Salisbury and nine miles east of Mazoe Police Camp, and south of Yellow Jacket Ruins. Built on a granite kopje. Believed to have been a fort. Constructed in best period of Zimbabwe architecture. Diameter twenty feet.

INYOTA RUINS

In Inyota Mountains, Mazoe, a few miles from Chipadzi's. Ruins of a circular wall round kopje, with a diameter from one hundred and fifty feet to two hundred feet. The walls are very ruined, and are only four feet in height, with courses as regular as those at Zimbabwe.

CHIPADZI RUINS

Near Chipadzi's village, twenty-five miles south-east of Mapandera's kraal, Mazoe. Remains of ancient fort. The wall was evidently intended to defend the most accessible side of the kopje and formed a stronghold. The stonework is an imitation of Zimbabwe style.

Makoni, whose personal name was Chipadzi, is buried here. Close to 'Mchwesa, Lo 'Bengula's assegai-maker, lived, and he and his people were all killed in 1888 by Lo 'Bengula's order.

WAINZI RUINS

These ruins are situated in South-West Mazoe, near the boundary of Lomagundi, seven miles north-west of Mapendera's kraal, on the north bank of the Wainzi River, on flat country surrounded by kopjes. These ruins cover an area of five or six acres. The bases of the walls are about seven or eight feet wide, the highest portion now standing being four feet. The plan of building is that of extended oval shape, the longest portion being three hundred feet in length. The majority of the walls can only be traced by their foundations. There is no ornamentation remaining. The entrances are on the north-east, north-west, and south sides, and there probably was one on the west side. The approach to the main entrance, which is on the north side, is through a maze of huge boulders through which the path zigzags. There

are many inclosures, but these appear to have been filled in. The débris heaps are extensive and contain portions of pottery with Zimbabwe patterns. Gold beads have been found in the river close by. Trees are growing in the walls and causing dilapidation.

UNNAMED RUINS

In *Travel and Adventure in South-East Africa* Mr. Selous gives an illustration of an ancient ruin in Mazoe which is not one of the above ruins.

CHAIN OF SEVEN FORTS*

In the Mazoe district is a chain of Zimbabwe forts leading from south of the Garamaputzi River to the Umvukwe Mountains. These are believed to be road-protecting forts.

No. 1 Ruin is five and a half miles south of the Garamaputzi River. This is a circular ruin with a diameter of between twenty-two feet and twenty-five feet, and is situated on an isolated granite kopje rising out from level country. The entrance is two feet in width. There is no ornamentation in walls still standing.

No. 2 Ruin is two and a half miles further south of Garamaputzi River and three miles further north of No. 1 Ruin. This is also situated on an isolated kopje rising out of level country. The walls, which are from four feet to seven feet wide, have rounded ends and are battered on both sides, the inside being as well built as the outside. Boulders have been utilised in the building of the wall. It is a steep climb up the kopjes to No. 1 and No. 2 Ruins, and each of these have wild figs, black and yellow, growing near them.

No. 3 Ruin is one and a half miles north of the Garamaputzi River, on a small kopje in a pass through a granite

* These particulars were furnished to the authors by Mr. Rowland Buck, of Bulawayo, who has visited these ruins.

ridge. This pass is in the direct line of all the seven ruins. This ruin is somewhat hidden by trees.

No. 4 Ruin is five miles north of Garamaputzi River, on a kopje.

No. 5 Ruin is eleven and a half miles north of Garamaputzi River and is situate on a low knoll in the middle of swampy ground covered with old rice gardens. This ruin is slightly to the west of the line or chain of forts, but probably the ancient road was diverted so as to avoid the swamp.

No. 6 Ruin is in the centre of a pass in the Umvukwe Mountains, twenty miles north of Garamaputzi River, and is built of granite blocks on metamorphic sandstone.

No. 7 Ruin is six and a half miles north of No. 6 Ruin, and is built of granite blocks on a slate kopje. Owing to the quantity of timber growing here these ruins are hidden from view, and can only be seen when closely approached.

BAMBARARI RUINS

These ruins are three miles north of Chiundo Mountains, Lomagunda, and twelve miles north of Kijukumbo Mountains.

ONAVE RUINS

Situated slightly to the west of half-way between Chiundo Mountains and Kijukumbo Mountains.

STONE DOOR RUINS

Mr. Harry Posselt has advised the authors that he has heard at several different times from different natives that large ruins with a stone door are to be found on the left bank of the Sabi, near Portuguese territory. All the reports of these ruins appear to agree in detail, especially with regard to the stone doorway and to a carving of a man on the

stone inside the doorway. In this district, judging by native and Portuguese reports, the ancients appear to have been particularly industrious.

Note.—Several other ancient ruins in Mashonaland are known to the authors, and arrangements have been made to secure fullest particulars of locations, with detailed descriptions. Some of these ruins are of considerable importance.

CHAPTER XXV

RUINS IN INYANGA AND MOUNT FURA DISTRICTS

INYANGA RUINS

THIS title for these ruins is scarcely a correct one, but popularly these ruins are known as the Inyanga Ruins, for they lie between Inyanga, Katerero's kraal, and Kaiser Wilhelm district.

Dr. Schlichter, Messrs. Telford Edwards, F.G.S., M.I.M.E., etc., L. G. Puzey, interpreter to Dr. Karl Peters' Expedition, 1899, Mr. N. MacGlashan, Commissioner of Mines, Bulawayo, Mr. C. H. Temple, late of Umtali, and also several Government officials and prospectors, have visited this district, and their reports concerning them, notwithstanding that most of these gentlemen were altogether unaware of what the others had written on the subject, coincide in every respect. The reports of Messrs. Telford Edwards and Puzey follow. Dr. Schlichter's views are contained in a paper read by him on February 27th, 1899, at the Royal Geographical Society. The authors of this work have also obtained from the files of Rhodesian newspapers further confirmatory information given by travellers and prospectors. Numerous photographs further confirm the written descriptions of these ruins.

But between the ruins of Zimbabwe construction described in the previous chapters and the Inyanga Ruins is, as shown in all reports of the latter, a very decided difference in the construction, a difference so palpable that each writer

who has inspected any Zimbabwe ruins draws attention to the fact. Equally emphatic is the division of the Inyanga Ruins into two distinct classes, (1) Hill Terraces and (2) Valley Ruins. Both of these types of buildings are described later.

To the "Hill Terraces" Dr. Schlichter does not ascribe antiquity. He and other writers believe they were built for horticultural purposes, in the same way as the vine terraces on the sunny slopes of the Rhine and other European rivers. Dr. Schlichter states that horticultural pursuits played a very important part in the mode of living of the old Bantu tribes. This appears to be borne out by the quantities of wild vines, wild figs, and wild lemons found in the vicinities of various Zimbabwes described in the foregoing chapters. If this opinion be the correct one, the soil from behind the retaining or terraced walls has, in the course of only a few hundred years, become to a very large extent washed away, leaving only the retaining walls on the hillsides.

The "Valley Ruins," however, unmistakably indicate a civilisation many centuries older, "belonging to the Zimbabwe period of antiquity" (Dr. Schlichter); but with most important modifications which give some substance to the generally accepted belief that the Inyanga "Valley Ruins" are of a late Zimbabwe period. Dr. Schlichter stated that "indications of the ancient Semitic stone and solar worship are numerous."

With reference to the "Valley Ruins" the following points should be noted:—

(1) Absence, so far as discoveries have been made, of elliptical plan and orientation.

(2) No massive foundations.

(3) Plumb, rectangular walls, only a comparatively few buildings being circular.

(4) Buildings generally are decidedly inferior to those of

Zimbabwe construction. In many instances the stones are unhewn, of all sizes, and are built in irregular courses. In some instances the stones are slightly faced and the courses are even.

(5) Dr. Schlichter asserts that the ruins are pre-Mohammedan.

(6) The builders were not the Portuguese of the fifteenth and sixteenth centuries, the plan and construction being altogether different from those of the oldest extant Portuguese buildings in Tete or on the coast.

It has been suggested that the "Hill Terraces" were the work of (1) the Arabians of the Magdoshu kingdom in Somaliland, who, according to De Barros, reached Sofala (1100 A.D.), exploited the gold mines, and formed a mixed population between the Arabs and Kaffirs; (2) the Arabs of Quiloa, who secured as suzerain power Sofala and Monomotapa and enjoyed the monopoly of the gold traffic in those regions for a long succession of years (Wilmot); and of (3) the original Bantu people. Abd-er-Rashid (1403) reports that the vine flourished in South-East Africa, and Dos Santos (1570) is particularly struck by the fact of vines flourishing extensively in the gold regions of Sofala and Monomotapa, the wild growth of which can be found in abundance in these parts to this day, and is frequently mentioned by travellers and prospectors. The conjecture as to the Arabs of the Magdoshu kingdom being the builders of the hill terraces is strengthened somewhat by the presence of the large areas of wild fruit trees—lemons, figs, vines, and bananas, etc., not indigenous to the country.

In contrasting the ruins of known Zimbabwe periods with the ruins north of Inyanga, the distinction appears so palpable that the authors have kept the descriptions of the two styles of buildings separate; and the correctness of this course will, they believe, be even more justified as further investigations of both types of ruins are entered upon.

On the 20th December, 1898, the following article on the "Wonders of Mashonaland," by Mr. Telford Edwards, appeared in the *Rhodesian Herald*, permission to reproduce which has been kindly given by Mr. Edwards:—

"Having returned from a trip in what I believe is a, so far, rather unfrequented part of Mashonaland, I should like to remark shortly on the really wondrous aspect of the country lying between Inyanga and the Kaiser Wilhelm Goldfields.

"Firstly, a few discursive remarks on the general topography and geology of the country between Old Umtali and Katerero's kraal, near the Kaiser Wilhelm district, by way of introduction.

"After leaving Meikle's Store, about twenty-six miles from Umtali (said to be), the country is hilly with rock formations, principally granitic, and timber scarce. Further north the country becomes very pretty, maintaining its hilly configuration, granitic rocks prevailing, with large greenstone 'dykes' observable towards the Forty-mile Store. These 'dykes' are principally dioritic and diabasic in lithological character. In the vicinity of the Forty-mile Store some quartz diorites are observable, and the country is well watered. Near the Inyanga Store some surface deposits of quartz débris appear. Getting on to the locality of the Pungwe Waterfalls the country (to my view) is charmingly pretty, and with fine agricultural possibilities. The rock formations showing principally appear to be quartz diorites and granites in several varieties. Timber generally is scarce, though a rather nice belt of thickly wooded country occurs not far from this part of the road. Many ancient ruins can be seen as Stradem's farm is approached.

"At this point of my journey I find the following observations in my note-book, which I give as jotted down *en route*, prefacing them by saying that, being a miner and not much of an archæologist or antiquary, my organs of vision were principally on the rock formations, and that exigencies of up-country Mashonaland travelling during the wet season are not figured out for developing either the ethno-

logical, anthropological, archæological, or any other 'ogical' proclivity which a man may possess. On this account the notes are probably less descriptive than they might be.

"Concerning the ancient work and ruins, they are as follows: After leaving Stradem's the country is practically granitic and dioritic, and the most extraordinary extent of ancient works is observable, these old works taking the form of terraces made in the sides of the kopjes, and formed of the granitic and dioritic boulders and stones found in the valley.

"*November 10th.* For fourteen miles after leaving Stradem's the extent of these ancient terraces is simply astonishing, and there is every evidence of the past existence of an ancient community, which must have had hundreds of thousands of inhabitants. Some of the towns owed their existence unmistakably to working the ground for alluvial gold. Large quantities of quartz débris are everywhere observable and also old ground sluices.

"*November 11th.* Country covered with ancient workings (old terraces, etc.) and heaps of quartz débris. Belts of schistose rock prevail, and many indications of the existence of quartz reefs are observable. Ancient terraces in astonishing abundance and of peculiar character. The schistose rocks about here are evidently derived from intrusive igneous rocks, etc., etc. (remarks not generally interesting here). Saw some quartz outcrops, decently promising. See no reason why there should not be gold around here.

"*November 12th.* From Nani Police Camp to Katerero's. Most of the country to-day has been granitic, with the exception of small portions. Total distance from Umtali to Katerero's kraal, taken by trekeometer, one hundred and twenty and a half miles (Umtali to Meikle's Store not measured).

"*November 13th.* Left for Ruania River.

"After this date notes refer to private properties, and do not apply further to ancient terraces. I may remark on the distances, however. The distances from Umtali to Katerero's were as follows:—

"Umtali to Meikle's Store (said to be)	26	miles.
Meikle's Store to Forty-mile Store .	19·10	„
Forty-mile Store to Inyanga Store .	13·91	„
Inyanga Store to Stradem's Store .	22·20	„
Stradem's Store to Slippery Creek .	17·50	„
Slippery Creek to Nani . . .	16·40	„
Nani Camp to Katerero's kraal . .	14·25	„
Total distance to Katerero's kraal .	129·36	„

"Measured by trekeometer, omitting first distance only, or say, from Umtali to Katerero's, about one hundred and thirty miles approximately, and after leaving Inyanga a pretty rough road it is, too.

"It would be quite impossible for me to convey to you in a necessarily short description any adequate idea of the immensity of labour implied in the enormous number of these ancient terraces. In the hilly country south of Stradem's, on my own passing observation, I saw at least one hundred and fifty square miles of country composed of kopjes ranging in height from one hundred to four hundred feet, literally covered on their slopes with these stone terraces, and the valleys literally strewn with the ruins of the ancient dwellings of a former teeming population. To endeavour to describe the old ruins, ground sluices, forts, etc., would necessitate much writing, and time does not permit. It was nothing in the character of these old works, in the architectural or artistic sense, that struck me with what I saw, for in that respect they are not particularly noticeable, neither should I judge them so very interesting; but a contemplation of the enormous tonnage of stones and earth, and débris generally, which has been rudely built into these terraces and other works, or in some way manipulated by some ancient workers, really left me amazed. It was properly described by Mr. Douglas Hudson (who was accompanying me) when he remarked, 'For fifty miles along this road every stone in the country has passed through someone's hands.'

"Now I take it that most of us are too much taken up with the practicalities of everyday work to have much time to cogitate or calculate as to what happened any number of years ago. The wondrous aspect of the portions of this country which I have been referring to may, therefore, only appeal to a few. A rough calculation touching the point I have been endeavouring to convey, viz. the immensity of the sheer physical labour entailed and as exhibited to-day in these old stone terraces and ruins, may, however, be interesting. It is briefly as follows:—

"For fifty miles I saw these ruins. I saw at least one and a half miles each side of the road, equalling fifty by three, that is one hundred and fifty square miles. I think I can truthfully say, therefore (without making any allowance for the enormously increased area arising from undulations, going up and down slopes of kopjes, etc., and any engineer knows what this means if it could be calculated out), that I saw one hundred and fifty square miles of country on which nearly every ton of loose stones, earth, débris, etc., has been shifted and placed into position, and carried up steep hills often hundreds of feet high. Goodness only knows how many thousands of these terraces I did not see!

"Now I am sure Messrs. Hudson and White, who are with me, will agree when I say that if the whole of the stones, mullock, earth, etc., which we saw on the slopes of the hills and valleys in terraces and ruined buildings could be distributed evenly over a flat surface equalling one hundred and fifty square miles, it would on a moderate calculation run to about eighteen inches to twenty inches thick, say the smaller amount, viz. one and a half feet. The bulk of these stones and boulders, being mostly of a granitic, dioritic, and siliceous character, to put twenty-four cubic feet to the ton is perfectly safe, I am sure. One square mile equals 27,878,400 square feet. Multiplying this by one and a half feet, we have 41,817,600 cubic feet. Taking this at twenty-four cubic feet to the ton we have, omitting all odd numbers, about 1,739,190 tons of ground per mile square, and as we have a further hundred and fifty square miles

to deal with, we get a total tonnage of manipulated 'ground' for that portion of the country I am referring to alone of something like 261,773,750 tons!

"Probably some of my mining engineering friends have very practical recollections of what it often costs an unfortunate mining company to get only a few hundred cubic yards of masonry done and only a few thousand cubic feet of surface débris shifted on the flat—I won't say anything about carrying it up the sides of the mountains—so that when a man walks along and gets ocular demonstration of between two and three hundred million tons of ground having been handled, it is liable to elicit from him a rather unusual remark, and with some justification, too. I cordially recommend anyone having the time and leisure, and possessing a predilection for historical research, to examine these wonders of Mashonaland.

"With but a small effort one can take a retrospective view of what once occurred in these valleys and kopjes of Mashonaland, and after travelling through the country it is easy to conjure up a mental picture of these valleys and hills, swarming with hundreds of thousands of workers in a bygone age, whose assiduity was only equalled by the immensity of their collective labour, and who must have been as unwearying in their toil as they were unmistakably equal to the necessity of their environments.

"In this connection I should remark it appears to be abundantly clear that the terraces were for purposes of cultivating corn or cereals of some sort, that what the population lived on was grown on these terraces, and the valleys were the residential parts. By no other means than by the cultivation of the slopes of the hills could a population so numerous have sustained itself, and that an enormous population did exist for many generations the very greatness of the work they accomplished abundantly proves.

"These wondrous old terraces* have of course been already written and talked about by others more competent to speak of ancient ruins than myself. Such, however, is the enormous amount of human labour which has been expended in their

* See *Inyanga Terraces* in Addenda.

making that so unusual a sight can always bear having attention drawn to it. Truly they bespeak a once busy time in Mashonaland history, and as history generally repeats itself, we can take it that these unique old terraces are auguries of a busy time again.

"In conclusion, I trust my disjointed remarks will induce further visitors to inspect these ancient terraces. I am sure they will be interested when they see them."

Mr. Telford Edwards has kindly furnished to the authors the following additional notes :—

"(1) *Ruins in terraces.*—The ruins are principally terraces, which rise up continually from the base to the apex of all the hills in the district to which my article refers.

"The terraces, as a rule, rise up in vertical lifts of about two or three feet, and extend backwards over a distance of mostly about seven to twelve feet. The terraces are all made very flat and of dry masonry. My inference is that these terraces were used to cultivate the crops upon which the population lived, as the valleys were the residential quarters, and there was obviously no room in the mountainous districts for the crops to be grown in the valleys.

"I have seen terraces made in a similar way by the natives of the New Hebrides Islands when I visited that part of the world, the only difference being that in the New Hebrides the sides of the terraces were made of stakes driven into the side of the hill.

"(2) *Workmanship, even courses, hewn stones, etc.*—The masonry in the terraces is not of hewn stone, but in many of the ruins of the residences of the ancient inhabitants the courses are very even, and the outside of the stone is dressed and squared a little.

"(3) *Width of foundations.*—As I have remarked, the whole of the valleys are taken up with the ruins of the residences of the former inhabitants. The width of the foundations is, in many cases, from two to four feet.

"(4) *Height of walls.*—The height of the walls at present standing in the valley is generally from two to four feet.

"(5) *Walls plumb.*—The walls are mostly plumb, and the entrances, in many cases, to the former houses are complicated, and in few cases straight, but they mostly have right-angular turns and not rounded bends.

"(6) *Steps.*—In many cases there are ruins of large terraces and steps to some great former buildings.

"(7) *Ornamentation.*—Very few evidences of ornamentation exist, though in some cases the ruins evidence considerable care having been taken by the builders.

"(8) *Exact situation—best approach from Salisbury.*—The situation of the ruins is about eighty miles nearly due north of Umtali. I am unacquainted with the best approach to the ground from Salisbury, as I got on to the locality of the ruins on my way from Salisbury to Katerero's kraal, in the Kaiser Wilhelm district.

"(9) *Tiers of terraces.*—Regarding the number of tiers of terraces it is impossible to say this with any exactitude, as the kopjes vary from one hundred to four hundred feet high. On many of the kopjes, however, commencing at the base, there are, I judge, one hundred terraces before you get to the top.

"(10) *Circular buildings.*—Regarding your question if there are any circular buildings, there are several, and also what look like old slave pits, sacrificial altars, grain-drying tables, etc.

"Nothing about the ruins reminded me of any connection with the Portuguese, only in a few parts of the ground covered by these ruins I think gold has been worked, and the evidences of large ground sluices are, in many cases, clearly shown.

"The country in the vicinity of the ruins, to the best of my knowledge, has not any gold-reefs of value so far discovered.

"*Watercourses.*—At Inyanga, and for a considerable distance north of that place, there are nice watercourses made by the ancients, and the way that the ancients seem to have levelled off the contours of the various hills around which the watercourses are laid is very astonishing, as they seem

to have been levelled with as much exactitude as we can accomplish with our best mathematical instruments in modern times."*

Mr. Leonard G. Puzey, of Bulawayo, acted as interpreter for the expedition of Dr. Karl Peters to the Mount Fura district of Zambesia in 1899. During his residence in Makombi's country, which is in Portuguese territory, and at places between Makombi's and the coast, he acquired an intimate knowledge of the native languages, and also of their customs. He became so well known to the powerful chief Makombi, whose tribe has not even yet been subdued by the Portuguese, that he secured from the chief several concessions for mining and trading in his country; and, for a white man, did exceptionally well in obtaining the confidence of the natives of that important district. Mr. Puzey's trading station was at Matonda, on the east side of the Lupata Gorge, on the Zambesi, from which Mount Fura, the locality of Dr. Peters' "Ophir," is thirty-five miles to the south. During his residence in these territories Mr. Puzey passed up and down the country on the east side of the Inyanga Range, each time by different routes through the elephant or forest country, also along the Umtali, Inyanga, and Katerero's Kraal road, on the Inyanga Plateau and in the Kaiser Wilhelm district.

He describes this country, including Inyanga, Kaiser Wilhelm, and the intermediate district, as one very rarely

* Several travellers agree in stating the ancient aqueduct area extends to one hundred and fifty miles north of Umtali; that the canals are exceedingly well made, and in parts are of a depth of five feet, and are carried at certain points through rock. Each writer believes that they could not have been the work of Kaffirs. The country through which they run is first-rate agricultural land.

"The art of hewing the living rock in order to convey water was common to all Semitic nations, and was not due to alien influences. It was a practice in Palestine long before that time when the patriarchs watered their flocks at Beersheba." . . . "The rock-cut canal on Mount Moriah had a length of six hundred and thirty metres." . . . "In Galilee rock-hewn canals run round the faces of the hills."—PERROT and CHIPIEZ.

visited by white men. The Inyanga Mountains are about nine thousand feet above sea-level and are most frequently covered with clouds, and on their eastern side slope precipitously throughout their whole length down towards the low country. The only gaps in the hills are where the Rivers Geradzi and Uraneia (Ruenya), which flow north, and the Pungwe, flowing south-east, break through the range. The Mazoe and Sabi Rivers take their sources in these mountains. Kaiser Wilhelm country is known by the natives as Ruperi.

At the outbreak of the Mashona rebellion in 1896 Mr. Puzey had a narrow escape from being murdered. He was then prospecting within thirty-five miles to the north of the Kaiser Wilhelm district, when his fifteen boys deserted him in the middle of the night. He had heard of the outbreak of the Matabele, but did not expect the Mashonas to rise. He returned to the kraal where he had obtained the boys. The chief urged him to leave the country, as he said there was fighting, and he lent him thirty-five boys as porters to carry his goods. He struck the Zambesi near the mouth of the Mazoe, and went down the Zambesi eighty miles in canoes to his station near the Lupata Gorge. While he was making his escape the rebels murdered a white man in the same district.

Hill terraces.—Mr. Puzey says that the road from the Forty-mile Store in Inyanga to Katerero's kraal runs through a series of ancient ruins with indications of enormous populations in some old times. The road for fully fifty miles crosses over and in between old terraces which extend on either side as far as the eye can reach, both in the valleys and from the base to summit of every hill. The ruined terraces, Mr. Puzey considers, never have been used as buildings for residences; but the ruins along the valleys, and certain ruins on some particularly high and prominent hills and bluffs, have once been used as habitations or fortresses.

Being acquainted with the style of buildings erected by the earliest Portuguese settlers along the Zambesi, Mr. Puzey comes to the conclusion that the ruins of the terraces and buildings were not erected by the Portuguese, or even by slaves under their supervision.

The terraced walls on the faces of the hills are made of unhewn stone of all sizes, which has apparently split squarely though fairly uniform. The courses are not so regular as in Zimbabwe buildings and are laid without mortar. The foundations are not more than two feet wide, their present height averaging from eighteen inches to three feet, but the débris shows they must once have been higher. The walls are plumb, except where earth-movement has displaced or bulged them. On the side of each of the hills there are several sets of tiers of terraces rising from the base to summit. The last ten or fifteen terraces approaching the summit are generally on bare rock, where the walls are often three feet in height. The only approaches to the summits are between the different sets of tiers, in which spaces are generally separate piles of stones placed at regular intervals, but the object of these piles is altogether inexplicable. All sorts of rock, according to the formation in each particular locality, have been used in their construction. In the north the walls are of pure white quartz, but in the south they are built of diorite, granite, and even sandstone. There is no attempt at decoration on the terraced walls. No cement work is visible. So far as one can ascertain by examination of the terraces, these were not originally filled in from behind, but the lower terraces are, owing to silting of soil, filled up almost to the level of the tops of the walls. The length of the terraced walls varies from ten to twenty yards, and the distances between the terraces average from six to twelve feet.

Valley ruins.—In most of the valleys, which in these districts are very numerous and which intersect the terraced hills, are

ruins of a totally different plan of architecture to those on the hills. These are built not along the beds of the valleys but on the lower slopes, and in some cases on the crests of hills which provide strategic positions. There is every evidence that these buildings were once occupied as dwellings and, in some instances, as fortresses. Along and just off the road, so far as could be seen, there are no complete ruins, only segments of walls and foundations, with quantities of stone débris lying near them. The ruins are seen at intervals along the road, and are so dilapidated that a casual observer would take most of them for parts of the terrace erections. The highest portions of the walls now standing noticed by Mr. Puzey were about four feet six inches, and no base could have been more than four feet in width, though in all probability they were very much less. He made no examination of the valley ruins, as his attention was mainly fixed on the vast number of hill terraces. The walls of the valley ruins appeared to be built much more regularly than those of the terraces. The stones must have been to some extent faced by tools, but the class of stone used would split squarely, thereby aiding the builders.

Asked whether these ruins in any way resembled the Zimbabwes of the first period of architecture and construction, Mr. Puzey at once replied, "No, they are nothing like them. They are not so massive, nor so well built, and, so far as I can judge, they are totally different." Mr. Puzey's opinion on this point is fully confirmed by that expressed by Mr. Telford Edwards, and other writers.

"*Slave pits.*"—Mr. Puzey did not, when in Inyanga, see any of these underground buildings, but was told of them by several. At one place near the Forty-mile Store is a large underground cellar with about ten inclosures with cemented floors, there being one main approach which sloped down into the inclosures like an inclined shaft. He was informed that the tops were domed over with arched

stonework and covered with earth. One farmer uses these cellars as styes for pigs, and has broken in the roof for purposes of ventilation. In one cellar is a portion of an iron ring with a staple fixed into the stonework. Mr. Puzey was told that the signwriting of the ancient Semitics, or markings on the walls of one of the cellars, as described by Dr. Schlichter, actually exists.

Aqueducts.—Near the Forty-mile Store, where the Inyanga Plateau falls away to Umtali, Mr. Puzey saw an aqueduct which starts from a waterfall half a mile from the road, and is clearly visible in its winding course round the sides of the hills for some miles. This is practically in good condition, being about two feet wide, and owing to filling up with silt on account of its disuse is at present from twelve to eighteen inches deep, passing through rock in several places. Mr. Puzey said there are several aqueducts in the same district.

Portuguese fort.—Mr. Puzey mentions a Portuguese fort not many miles to the west from the Inyanga Police Camp. Dr. Schlichter's view of this ruin shows plumb walls, squared entrance, larger stones than used in Zimbabwe buildings, and these of irregular sizes laid in uneven courses. This building, says Mr. Puzey, closely resembles the style of construction shown by the Portuguese forts at Tete and Senna.

Alluvial gold.—Both the Mazoe and Ruenya take their rise in the Inyanga Mountains and flow toward the north. Where these rivers flow through the hills it is no uncommon sight, says Mr. Puzey, to witness at one spot as many as fifteen to twenty women and children engaged in washing for alluvial gold, and perhaps as many as sixty to eighty women can be seen so working within the distance of a mile. The natives keep the gold so obtained in quills and reeds.

INSIDE VIEW OF ENTRANCE TO ANCIENT "SLAVE PIT" (CONJECTURED)
INYANGA

The natives of these districts can give no opinion as to the origin of these buildings, and will simply remark, "These walls were always here." The natives of this country call themselves Makalangas, and speak the same language, but with a slightly different dialect, as the Makalangas in Victoria and Zimbabwe districts, and in Gaziland. They appear to acknowledge the existence of a Deity, which they call *Umlunga Pezulu*—"the Spirit in the skies."

MR. J. G. McDONALD'S ACCOUNT.

In an interview with Mr. J. G. McDonald, of Bulawayo, published in the *Bulawayo Chronicle* (18th September, 1901), some additional particulars are given concerning the ruins in this district:—

"One of the most interesting features of the Inyanga district is the extraordinary pits with which the whole country is filled; every two or three hundred yards one comes across them. Roughly their depth is about twenty feet. They are circular in shape, and have a diameter of from twelve to fifteen feet. They are now largely filled up with soil, trees of considerable size growing in them, showing that the pits belong to some long-past age. The walls are built up with solid granite blocks, which are roughly dressed, and the construction is finished off in a workmanlike manner, better than any dry building of the present day. No mortar has been used in the building. An entrance to the pits was effected at a point some distance from the edge of the pit by a sloping gangway or path, very narrow, which, when it disappeared underground, was also walled over with granite blocks. It is like a small tunnel. The idea that they were slave pits emanates from the style of the entrance, and it is true that once in there the slaves could not climb up the walls and escape, and one guard could hold the place quite easily.

"Everything points to the fact that at one time the district carried a teeming population. The whole country has been

tilled, and though there is a great depth of soil, the first eighteen inches has not recovered its original fertility, it having been exhausted by these bygone agriculturists. It is only by going two or three feet below the surface that you encounter soil capable of producing good crops. This naturally took the local farmers some time to discover, but now they are aware of the fact they are raising capital crops—better forage than I have seen anywhere else in Rhodesia.

"As you come from Inyanga along the present road for some forty miles you pass through a chain of old forts, some of which are in a good state of preservation. These forts are like the system of blockhouses along the railway lines in the newly conquered territories, but are much closer together, in many cases being within a hundred yards of each other, while I am safe in saying none are more than three hundred yards apart. As you approach the Mashonaland Railway the line of forts breaks away apparently either towards Zimbabwe or the Sabi River, and I have no doubt that if followed up they would probably be found to continue to Sofala, or whatever port on the East Coast was frequented by the traders, or was the outlet for the produce of the country. At many of the forts were what appeared to be ruins of what must, I think, have been watch towers; at any rate, they are very similar to the famous round towers found in different parts of Ireland. There is a big field of research here, and I think it would be a good thing if some member of the Scientific Association were to trace the ruins up, and find out where they go to.

"The great feature of the Inyanga country is the extraordinary quantity of water which runs down every valley either as a stream or river, and consequently irrigation is a beautifully simple process. In many places water can be taken out by just cutting a furrow with a plough, which runs along for miles, putting thousands of acres under cultivation if required. Most of the present farmers use the furrows built by the previous occupiers. Whoever they were, they seem to have had quite as good a knowledge of irrigation as

any of us have to-day. The work is first-class, and the furrows dug by the old race are in splendid condition, and when wanted to-day only have to be cleaned out. It is the same with the pits and the forts; they have stood the test of time remarkably well, except where they have been knocked about by Kaffirs.

"I think," continued Mr. McDonald, "that the Inyanga district was the chief source of their grain supply, and that the mining districts were probably supplied from there. The forts or blockhouses were used for the protection of their caravans passing up and down the country. They were unquestionably a very intelligent race."

MOUNT FURA DISTRICT

Mr. Puzey, who traded at Matonda, on the Zambesi, at the west side of the Lupata Gorge, and knows this district and people of Makombi's country, in which Dr. Peters avers he has discovered "Ophir," acted, as mentioned earlier, as guide and interpreter to Dr. Peters' expedition to these parts in 1899. Mr. Puzey's trading station on the Zambesi is situated within this area.

Dr. Peters' particular "Ophir" only covers an extent of country about one hundred and twenty miles from east to west and thirty to forty miles from north to south. The eastern point is a few miles west of Senna, and its western extremity is about fifty or sixty miles east of Tete; its northern boundary is formed by the Zambesi, while its most southerly point is on the Muira River, at nearly forty miles south of the Lupata Gorge. South of the gorge are the Lupata Hills, which run in a south-westerly direction towards the Ruenya River. A hilly range runs from the Zambesi along the east side of the Muira River, and between this river and the Lupata Range lies a dead-level plain of immense area known as the Valley of Injakafura, which at one time must have been a great lake. Mount

Injakafura is a hill on the south side of the Lupata Range, directly overlooking the valley, and is the most easterly hill in Dr. Peters' "Ophir" area. Mount Puzey is a corresponding hill also on the south side of the Lupata Range, and directly overlooks the Injakafura Valley, but more to the west of Mount Injakafura. Mr. Puzey discovered this hill, and it now bears his name on all late maps of the country. The Injakafura kraal, Makombi's second kraal, lies on the south of Injakafura and close to the Muira River. There are very numerous ancient workings on the Lupata Hills, north-west of Mount Puzey.

There are ruins on the south faces of Mounts Puzey and Injakafura built of sandstone and crystalline slate. There are no rising tiers of terraces as at Inyanga, only ruins, so far as can be discerned, of walls inclosing comparatively level spaces on the faces of these two hills. The highest portion of the walls stands only six or nine inches above the ground, except in the crevices of the rocks, which have been built up at several points to form the foundations of the main outer wall. Mr. Puzey, who first rediscovered these ruins, says that only the bases of the walls now remain and these could not be more than two or three feet wide at the utmost. There are enormous piles of débris of walls lying about in all directions. He believes that boulders falling from the hill assisted in the demolition of the walls.

Dr. Peters states he discovered phalli and betylæ (sacred stones) at these ruins.

Dr. Peters quotes from the work of the celebrated French geographer, Delisle, which was published in 1705, as follows :—

"Fifty lieues (one lieue is about two and one-third miles) from Teté, ten lieues from Bocuto, and half a day's journey from the River Mansoro, is the fort of Massapa, which used to be the principal gold market; . . . from there onward in the country one finds the gold mines. . . . Near this place is

the great mountain of Fura, very rich in gold, and there are people who say that this name 'Fura' is a corruption of the name 'Ophir.' One sees to-day still in this mountain walls of cyclopean stones of the height of a man, fixed together with admirable art, without mortar and without being worked (except the outside stones) with a pick. It was apparently within these walls that the Jews of the navy of Solomon staid."

He also quotes Couto, who, speaking of the gold mines here, says: "The richest mines of all are those of Massapa, from which the Queen of Sheba took the greater part of the gold which she went to offer to the Temple of Solomon, and it is Ophir, for the Kaffirs call it *Fur*, the Moors *Afur*.

The Doctor continues: "What particularly struck me on the old map (the French map, *Atlas Historique*, of 1705) was the fact that Lake Rufumbo was placed opposite Mount Fura. Now I found on the latest map of Africa Lake Rufumbo opposite the district of Tambara, in which is a place called on the modern map Injakafura. I soon found that 'Inja,' in the language of the natives, means 'place,' 'ka' means big or great, so 'Injakafura' would mean 'place of the great Fura.' I may as well mention here that Fura in the Makalanga language means 'mine' or 'hole,' so that 'Injakafura' means 'place of the great mine.' It has the same meaning, according to the most recent researches, as the old Semitic word 'Ophir' or 'Afer,' as it was pronounced in South Arabia, and which signifies 'mine' or 'hole.'"

"In most of the reports which I read on this question a place called 'Massapa' or 'Massaba' is mentioned as being near Fura—the mines of Fura are often called the mines of 'Massapa.' In this name I find an indication of an ancient Sabæan settlement."

RUIN IN MAKOMBI'S COUNTRY

Mr. Puzey discovered in Makombi's country, one hundred miles east-north-east of the Inyanga Police Camp, the remains of a wall, quite four feet in height, which had been at a late period utilised by the natives as a portion of their walls or fencing for a kraal. Width of base two feet two inches, and one foot six inches on the top. It was built of granite blocks similar to the stones used in the "Valley Ruins" at Inyanga.

APPENDIX

NOTE A

SOME ANCIENT HAMMERS FOUND IN THE TATI DISTRICT

[Paper read by Mr. R. C. Dowie, on 31st July, 1901, before the Rhodesia Scientific Association, Bulawayo, and published in the *Bulawayo Chronicle.*]

"THE rounded pieces of stone which you see before you come from an ancient working situated on a range of hills called the Amalobe Hills, within a few miles of Ramaquebane, in the Tati Concessions. The ancient working is one of a series which run in two parallel chains, one on each side of the ridge, or lengthened summit of one of the lower hills. The workings are part of a property known as the Iron Mount, which belongs to the Tati Blue Jacket Syndicate.

"There were about thirty of these ancient hammers, as I presume they are, which had been excavated from the débris of the old working. This must have been about forty feet deep originally, as a shaft of twenty-five feet virtual depth discloses the solid formation at the bottom, and the top of the shaft commences about fifteen or twenty feet below what appears to have been the original face of the hill. The surrounding rock, pieces of which are strewn for hundreds of yards on all sides, seems a kind of banded ironstone, though it has a cleavage similar to schist.

"As you will observe from these specimens, it possesses a very pretty purplish hue with a sheen resembling silk. There is also a small portion of reef. It is curious in appearance, and with a view of finding out something about it, I asked Mr. David Ferguson, the consulting engineer to Colenbrander's Matabeleland Development

Company, to assay a small portion. He has very kindly done so, and tells me these pieces of banded ironstone and quartz contain a large proportion of sesquioxide of iron Fe_2O_3 (hematite) and carry about three pennyweights of gold. These portions of the walls inclosing the reef, which are quartzite, also contain iron and traces of gold. These two other samples are merely the stuff pounded finely.

"It should be said that the ancient workings extend for several hundred yards. I examined five of them. Unfortunately one of the largest has, during the past three years, become almost quite filled up by a rock slip. A mass of rock weighing some hundreds of tons, forming part of the peak of the hill, has after standing perhaps several centuries, or it may be much longer, at last succumbed to the corroding finger of time and the elements and overbalanced into the abyss below. Clambering among these broken masses has its unpleasantries, as the place possesses a most evil reputation for being the haunt of black mambas, who find a congenial home within its nooks and crannies, and are occasionally seen basking in the sun on the surface of the rocks. So I did not examine these fallen rocks quite so much as I should have liked.

"The hammers seem to me to be specially interesting, because they show very considerable signs of use and wear. I take it that they were used to break quartz for the sake of the gold, and that parts of the reef were of sufficient grade to make this worth while. No doubt they were originally globular, as many are still, and by constant pounding have developed faces and then hollows, becoming almost cubical in shape. As to the way they were operated, it seems most likely to me they were not used directly by hand, but were bound round with a flexible withe similar to osier bark. But that is merely a speculation. I was unable to see any traces of a rock face which had been used as a mill, but these may easily have become effaced or covered up in the course of time.

"I do not know whether this Association will attach any value to the hammers or the samples of reef and formation, but at any rate, it is an endeavour to follow the advice of Mr. P. B. S. Wrey, President of the Chamber of Mines, to include the walls, and if the Association accepts them, I have strong hopes of being able at a later period to procure better specimens.

"I am, of course, aware that similar hammers, usually, I think, of larger size, have been found in Rhodesia, but that in no way

detracts from the interest attaching to these. About thirty of these hammers have been found in one place; many of them imperfect in shape, chipped or flaked or broken, and a systematic search would probably discover dozens, as in the course of about ten minutes I myself picked up half a dozen from the débris, in addition to those I saw which had been previously found and placed together. These would seem to indicate that the ancient miners had probably spent many years in working here, as indeed the magnitude of the chasms they have left behind abundantly testifies."

NOTE B

DESCRIPTION OF AN ANCIENT COPPER MINE

[Paper read by Mr. R. C. Dowie, 31st July, 1901, before the Rhodesia Scientific Association, Bulawayo, and published in the *Bulawayo Chronicle*.]

"The remarks I am about to make relate to a subject of such deep interest that I regret I can only give such an inadequate account of it. It is an ancient copper mine, the like of which I never saw before, and which is, so far as I am aware, a rarity south of the Zambesi. The Selkirk property, which contains this mine, also belonging to the Blue Jacket Syndicate, lies about twenty miles south-east of Francistown.

"The immediate surroundings of this scene of operations on the part of a long-forgotten people consist of very thick bush, and it is a peculiar feature that the place is, although situated on a low-lying rather flat-topped hill, extremely difficult to find. On at least three sides you might pass within five hundred or six hundred yards and never see it. I estimated, in fact, from looking at it when I knew where it was, that it becomes quite lost to sight within little more than three hundred yards. On approaching the hill on a gradual rise, it is very noticeable that the brushwood stops abruptly, and a little further up, the grass, which is here short, dies completely away, and the ground becomes bare. On parts of it indeed nothing will grow, so strong is the mineralisation of the formation. It is as if the hill were the result of a thrusting-up of some different formation. The surface of the ground is covered with pieces of stone similar to those before you stained with this green colour,

which is due to carbonate of copper, and resembles a rough malachite.

"Well, then, looking before you, you see this kopje with the rounded top in front, and notice that it stretches away on the left and has two peaks. As you walk up among the green-stained stone, which becomes thicker as you ascend, you suddenly arrive at the top and find it is flatter and of a greater area than you imagined. There is a number of depressions in it, filled with large boulders and smaller broken pieces. Walking to the centre one, the sides of which form the apex of the hill, you are gradually enabled to grasp the scene. There are five ancient workings side by side, varying from thirty to seventy feet long, each about twelve or fifteen feet wide, and there is about fifteen feet between each. Apparently there have been five separate (superficially) copper reefs, in all of which a considerable amount of work has been done. A small shaft has recently been sunk in one to about twenty feet, but I did not examine it, as there is nothing to be learned, it being timbered all the way down. Seeing the huge boulders piled up, many of them being pieces of country rock which, deprived of support, had fallen back into the hollows, the scene is one of weird desolation.

"Mr. Ferguson has also kindly furnished me with some information concerning these specimens. The large pieces appear to be a decomposed volcanic rock, the colour of which is due to green carbonate of copper, and this small piece of reef is rich in copper and carries probably fifteen per cent. of that metal. I am also informed by Mr. E. T. Temby, the general manager of the Syndicate, that some of the reef is richer than this.

"There is one peculiar feature in regard to these open stopes, and that is the cleanness with which the reef has been taken out. No modern miner could do it better, and as a general rule it may be said that his prototype, where he worked seriously, and not merely prospectively, did his work very thoroughly.

"Time did not permit of more than half an hour being spent at the copper mine, when a move had to be made on to something else. A little way down from the top of the hill there is a slight rise, and joining some boulders are the remains of an ancient wall against a slight eminence. There is little of it left, and the stones have no pattern. It is just a piece of plain stonework similar to that of many ancient ruins, but still it is interesting, as being,

perhaps, the relics of a fort from whence watch could be kept over the surrounding country.

"I come now to the last part of this note. Passing by the little bit of stonework about a hundred yards beyond—and this part of hill has more grass on it—one comes to a considerable depression, which is only about ten feet deep and forty feet long. It is reddish-black in appearance, and all around are pieces of iron slag similar to those I have here. This bit of the hill seems to be composed almost entirely of iron, and it is rather difficult to conclude that the ancients here were intent on working anything but iron.

"But I have been told there is a small quartz stringer running through this working which is auriferous. An examination of both ends of the working failed to enable me to say that I discerned this, but I do not doubt it, as it seems that the fact of this slag carrying high in iron, and also containing traces of gold, lends a considerable degree of probability to the statement."

NOTE C

ANCIENT COPPER-WORKINGS

There are ancient copper-workings near Alaska and Hard Times Reefs, in the Lomagunda district, also on the Selkirk property and near Tati, in the Tati Concessions. Mr. Baines reported ancient copper-workings north of the Murchison Range, in the Transvaal Colony. The ancient copper-workings near the Alaska Mine are of enormous extent, one being two thousand feet in length, and of great depth and width. The ancient copper-workings on Bradley's Copper, on the Sabi, near Melsetter, are extensive, one being about two thousand feet long, with open workings one hundred feet deep and three hundred to four hundred feet wide. It is believed the ancients mined for copper in Manicaland, while ancient copper-workings exist extensively on the Kufukwe River. Ancient copper-workings have been reported at several other points in Southern Rhodesia.

NOTE D

"THE CLAY ZIMBABWE"

Situation.—These ruins are situated twenty miles north-east of Thabas Imamba, near the Mabula Hill, and near a tributary of the Umvunga River, in the Gwelo district. They are nine miles east from Hartley Hill Road, between the Shanghani and Umvunga Rivers. To approach these ruins leave the Hartley Hill Road two miles south of the drift over the Umvunga.

Messrs. Neal and Johnson heard of these ruins before the outbreak of the native rebellion in 1896 from Zachili, the Matabele chief, who during the first war assisted Forbes' column by supplying provisions when the troopers were starving, and guiding the column so as to avoid the Matabele impis assembled at Thabas Imamba waiting to destroy the column. Zachili may also be remembered as the Induna who assisted the Government with information during the war. For rendering such services to the white men he was murdered by the Matabele in the rebellion of 1896. Messrs. Neal and Johnson owe their lives to Zachili, who indirectly advised them to return to Bulawayo at once, as "the fever was going to be very bad." It was not until their arrival in town that they first knew that the native rebellion had already broken out.

Period.—This is altogether doubtful, but they are not ancient. So far no other similarly constructed buildings have been found in Rhodesia. Mr. Alexander Davis, editor of *Rhodesia*, states that in the Lydenburg district, and near Barberton, similar buildings are to be found, several of which he has examined cursorily. He considers them to be comparatively modern structures.

Extent.—These two ruins are within three hundred feet of each other, but a ruined wall of the same construction is two and a half miles to the north-east of these ruins.

Construction.—These ruins are entirely built of solid clay, not in bricks, but burnt in their entirety and not in sections. The clay is composed of granite powder, and this has been of so binding a nature that no cracks appear in the walls except at the tops of the joints between the main and divisional walls. The walls, both

inside and outside, are beautifully smoothed over, and resemble fire-brick material in hardness. The two ruins are circular.

Ornamentation.—There is no decoration or inscription.

General description.—No. 1 Ruin has a diameter of about twenty-five feet, with a smaller circular and central inner building of about eight feet in diameter. The walls are two feet six inches wide at base, eighteen inches wide on the present tops, which are the original tops, and are about seventeen feet in height. There are six inclosures; five are of the same size, the divisional walls being laid from the main walls to the walls of the central inclosure in the manner of the spokes of a wheel converging on the hub, this plan giving all the five inclosures the shape of a wedge or of the keystone of an arch.

The only entrance is on the south-west side, and this is three feet six inches, with squared entrance walls, and the entrance is open right to the top of the walls. The entrance to the inner central inclosure is directly opposite the main entrance, and this is also open to the top of the wall. The walls of the central inclosure have been considerably higher than seventeen feet, which is the height of the outside walls, and as this building has evidently once been roofed in, this was in all probability to give the roof a proper pitch.

The inclosures have not been filled in, and the original floors are eighteen inches above the bed-rock, and can still be seen.

The strangest feature of these ruins is that four of the inclosures have no entrances so far as has yet been discovered. The divisional walls reach up to the seventeen-feet level. The only entrances could be creep-holes. Probably the natural silting in of soil may have covered these holes if they exist. The floors of the inclosures are made of the usual granite-powder cement. The four inclosures, which are apparently without any entrances, have been occupied.

No. 2 Ruin is almost similar to No. 1 Ruin, and the description of No. 1 Ruin will answer for both.

No. 3 Ruin. This consists of a straight wall made of the same material. The location of the wall is two and a half miles north of Nos. 1 and 2 Ruins. This wall is about thirty feet in length, ten feet in height, eighteen inches at base, and one foot on present top. There being no trace of any extensions of this ruin, it was probably in course of erection, and never completed.

It is wonderful how these clay walls could remain in such a

perfectly good condition, seeing that for a long period of time these ruins could have had no roofs.

General notes.—No gold ornaments have been found in these ruins. No exploration work was accomplished here, as Messrs. Neal and Johnson were compelled to leave owing to the outbreak of the Matabele rebellion.

The peculiar features of these ruins are—

1. The inability to fix the exact period of their erection.
2. Their being built entirely of burnt clay.
3. No entrances as yet discovered to some of the inclosures.
4. The indubitable evidence that gold-dust in large quantities was stored here.

Finds.—Only gold-dust in fairly large quantities in the soil within and near the ruins. The soil in the interior panned at least one ounce to the ton.

NOTE E

FIND ON MOUNT HOVA

[From the *Bulawayo Chronicle.*]

An extremely interesting discovery has recently been made on Mount Hova, an eminence of considerable height in the Bembesi district, situated about sixty-five miles more or less north of Bulawayo. It was learned from the natives by a well-known resident of the town who was travelling in that district that there was an ancient building on Mount Hova, and having scaled the hill, he discovered this to be the case. The shape of this edifice is so peculiar that it is certain to arouse much speculation among archæologists as to its nature, original purpose, and the race to which its builders belonged.

Its contour in shape is very like a locomotive or portable engine boiler, with a framework of masonry built up so as to meet the greatest swell of the boiler, and these outside walls have a slight batter outwards and downwards showing that the builders were aware of the importance of a broad foundation. The top of the boiler, so to speak, is semi-cylindrical. To make the likeness more complete still, one part of the top has what may be called a steam-

dome which is slightly truncated on its top with a flat stone. In dimensions the building is between roughly sixteen and eighteen feet long and ten to twelve feet wide, and it lies nearly, or perhaps quite, east and west. Leading up to it is a flight of stone stairs about ten feet long.

Some guesses have been hazarded regarding this mysterious structure, but at present the most plausible is that it is the mausoleum of some long-forgotten king or chief who chose to be buried in this strange fashion. Mr. W. G. Neal, who has not seen this find, is of opinion that this is the first building of the kind discovered in this country.

NOTE F

MASHONAS AND GOLD-EXTRACTION

Mr. F. C. Selous, speaking at a meeting of the Royal Geographical Society, March, 1899, stated:—

"Mr. Thomas Baines, the well-known traveller and artist, found the Mashonas extracting gold from hard quartz reefs in the neighbourhood of Lo Magondi's (about seventy miles north-west of the present town of Salisbury) as late as 1870. You will find a full account of this experience in Mr. Baines's book, the *Gold Regions of South-East Africa*. To get gold-bearing quartz from a hard reef the Mashonas first lighted fires against the hard rock, and then perhaps threw water on it, and they were then able to pick out pieces with their little axes. These pieces of quartz were then stacked amongst piles of firewood and roasted, and afterwards the burnt quartz was crushed and the gold washed out of it. Thus you will see that the art of extracting gold from quartz, which was first introduced into South-East Africa by a people of Semitic race—as Dr. Schlichter considers—some three thousand years ago, has endured in that country until quite recent times."

NOTE G

"OPHIR" AND INDIA

The Royal Geographical Society's *Journal*, April, 1899, contains the following communication from Colonel Sir Thomas Holdich:—

"The evidences that exist of the mediæval occupation of countries lying between India and Africa by Arabs seem rather to support Dr. Schlichter's contention that the African ruins are of Arabic or Semitic origin. Although I have come across no traces of Arab occupation on the coasts of Persia, or in Makran, that are *clearly* pre-Mohammedan, it is historically certain that the Arabs were present in large numbers, both in Sistan and Makran (probably also in India) long before their invasion of Sind, which took place early in the eighth century A.D. It was the Arab Governor of Makran who helped Mahomed Kassim through that country to the Indian frontier, so that the Arabs were probably dominant there by the end of the seventh century. A prominent feature of that invasion was the support of the invading army by the fleet which conveyed the engines of war to be used against the walls of Debal, in the Indian delta. The existence of such a fleet implies that the Arabs had long been navigators of the Eastern seas before that time; indeed, we must reckon many centuries to be necessary for the development of a fleet of that nature. Nor is there any reason to suppose that the Arabs were not as early navigators as the Phœnicians (who appear to have originated on the coast of Arabia) or the Greeks. By the time that Vasco da Gama rounded the Cape the Arabs were able to take latitude observations by using the astrolabe, and could get their longitude from observations of the moon's eclipse, and they had learnt the use of the compass from the Chinese, whilst they apparently borrowed their system of notation from India. I have always suspected Vasco da Gama of having trusted entirely to Arab pilots to find his way to India. That the Arabs were the first astronomers and the earliest navigators is, I think, also supported by the fact that all the early ocean-going ships of Europe were built on the lines of the Arab 'buggalow'; many of our naval terms are Arabic (such as 'admiral,' 'barge,' 'dinghy,' and even 'jolly-boat'),

and the names of the constellations are also Arabic. If the Arabs were not the first navigators, they obviously invented their own system of navigation, and borrowed it from no one. There is absolutely no evidence that I know of supporting the idea that the Indians crossed to Africa from India. The Aryans never were sailors. The Dravidians (notably the Telingas) certainly were, but they went eastward to Burmah and the Straits, and formed settlements there, and not in the west. On the other hand, the position of the coast Arab city of Tiz, in Makran (which I have explored), and of others on the south coast of Arabia, almost proves the existence of a very ancient trade along the east coast of Africa, a theory which is certainly strongly supported by the evidence of the *Periplus of the Erythræan Sea*, which is supposed to have been written five centuries before the rise of the prophet in Arabia."

NOTE H

PHŒNICIAN ENTERPRISE

[Extract from Paper read by Mr. H. O'Neill, F.R.A.S., H.M. Consul at Mozambique, at the Royal Geographical Society's Meeting, 11th May, 1885.]

"A belief that in prehistoric times the Phœnician nation was far more widely scattered than it has hitherto been supposed they were appears to be daily gaining ground. Recent discovery has brought to light many traces of an ancient civilisation of the origin of which we know nothing. Inscriptions found at some of these, amongst which I may mention those brought home from Easter Island by Sir Thomas Brassey, will, it is hoped, throw some light upon this field of research. There are some, who have made the subject the study of a lifetime, who believe that the ancient cities, ruins of which are met with upon the Pacific Islands, and also many of those in Beloochistan, Afghanistan, and other distant parts of the globe, are due to a widespread emigration of the Phœnician race. If they, through a satisfactory reading of the inscriptions found there, should prove their contention, then the suggestion I have thrown out respecting the cities south of the Zambesi is, I submit, strengthened; for it will have been conclusively shown that neither distance nor intervening breadth of ocean presented

insurmountable obstacles to the colonising enterprise of the Phœnician people. And there may prove to be some truth in the writings of Sanchoniathon, the Phœnician priest, who assigns to his people a marvellous antiquity, and valuable information may yet be gathered from a work hitherto considered fabulous and discreditable.

"But apart from any evidence which lately found inscriptions may present, is it not difficult to believe that a nation which at least 1,200 years before Christ had founded colonies in every part of the Mediterranean Sea, had passed the Straits of Gibraltar and established themselves upon the western coast of Spain, whose ships traversed the northern seas, and penetrating southwards discovered the Canary Islands, and who shortly afterwards sent out fleets with thousands of emigrants—such as those which left Carthage under Hanno—to found colonies upon the West African coast; is it not difficult, I ask, to believe that a nation capable of such enterprises as these would be deterred by any difficulties of distance or navigation from venturing to low latitudes upon the East African coast?

"It does not, however, come within the scope of this paper to discuss this subject here. I have only ventured to say so much to show that East Africa, in the very earliest times, appears to have formed a favourite field for colonial enterprise, and I desire also to awaken your interest in the archæological treasures which, I am convinced, lie hidden there."

NOTE I

The views, drawn by the late Mr. Thomas Baines, of the Acropolis ruins, and of the conical tower at Zimbabwe, are reproduced on pp. 442, 443 of the *Proceedings of the Royal Geographical Society*, July, 1885.

NOTE J

TO ARCHÆOLOGISTS IN RHODESIA

The following points are suggested by the authors to gentlemen who may examine any ancient ruin in the country.

Situation of ruin.—District, nearest Induna's or Chief's kraal,

prominent and named kopje in locality or range of hills, all landmarks, river (stating bank and distance), water in locality, nature of country (open, hilly, timbered, etc.), best approach to ruins, describe road or path from nearest main road, on knoll or kopje, view from ruins, country formation.

Plan of ruin.—Elliptical, circular, or angular, with outside measurements.

Walls.—State whether massive and symmetrical, workmanship excellent or poor, bonded throughout courses or inside of walls filled in promiscuously with rough fragments of stone, stone used, if foundations are on rock, courses regular or irregular, if boulders utilised, well-preserved or dilapidated, width of bases, heights, outside and inside measurements, widths of tops, walls plumb or battered back, if damaged by trees, if wall débris abundant.

Ornamentation.—Herring-bone, dentelle, chevron, check, or sloping-block, lengths, heights from ground, points of compass faced, if of foreign stone.

Entrances.—Number, points of compass faced, rounded or square, traces of steps and if cemented, pavement of entrance passage, height of walls on each side, extent of entrance passages with widths and heights of walls at various points, whether entrance opens directly into the interior and without a passage.

Terraces.—If present, retaining walls, on ground or rock formation, step-backs, number, plumb, angular, spaces between, if wall has outside face only, character of inside face of terraced wall, workmanship, size of blocks.

Interior.—Height of soil above outside level, whether it has silted in naturally or been deliberately taken there, if filled in with stones, floor on bed-rock or cemented, traces of divisional walls, number of inclosures, measurements of divisional walls, workmanship, courses, decorative patterns on walls, steps, cones, rounded buttresses, heights, diameter at bases and summits, signs of ancient or modern occupation, traces of Kaffir furnaces, remains of circular stone or clay buildings on floors.

Exterior.—Débris heaps, situation, extent, finds, metal, pottery.

Remains or traces of walls or foundations outside main ruins, character of workmanship, circular foundations, measurements, distances.

Nearest point and distance to gold area, ancient workings (numerous or otherwise), signs of crushings near river.

NOTE K

MESSRS. W. G. NEAL AND G. JOHNSON, THE ANCIENT RUINS EXPLORERS

[From *Bulawayo Chronicle.*]

Messrs. Neal and Johnson have since May, 1895, to December, 1900, been engaged in the sole work of exploring the ancient ruins in Rhodesia south of the Zambesi under the general grants made by the British South Africa Company to Messrs. M. Gifford and Jefferson Clarke. Both were born in Durban, Mr. Neal being a nephew of Mr. William Exell, of that town. They have been partners in prospecting and exploration since 1882.

Their first work was when the gold rush to the Kantoor in the Barberton district occurred. They were the first to crush in the Barberton district, and their mill was erected in 1883 on the Pioneer Reef. The mill, which was the first to run with water power, had wooden stamps shod with tyre iron, and the average result for six months was over two ounces of gold to the ton. Mr. Johnson was greatly interested in the Victoria Reef, the principal property in the Barberton district. This was at a time when Mr. Alan Wilson and Mr. Tom Osborne had a small mill on a claim on the same reef but lower down. Mr. H. Culverwell, now of Shiloh, and Mr. W. Napier (now Colonel Napier, C.M.G.), were on Moodie's, at Barberton. Mr. Alexander Boggie, of Bulawayo, was also at Barberton at that time. Subsequently Mr. Neal prospected extensively in Swazieland, where he was interested in the Hancock Concession, which lies between Pigg's Peak and Forbes' Concession. He discovered coal on the Lebombo Flats, on what is now the Seaforth Concession. He went to the Rand in 1887 and prospected extensively, and was engaged on the Mint Mine as amalgamator, and saw the first deep level mine on the Rand pegged off. In 1889 he commenced prospecting in the district of the Murchison Range, and carried it on for seventeen months; the numerous old workings here being the first stimulant to his naturally inquiring and researching propensities.

In 1891 Messrs. Neal and Exell came to Salisbury, and discovered

the Yellow Jacket property. Mr. Neal was the first to discover the Yellow Jacket Ruins, and was Mr. Bent's host when that gentleman visited them. In 1892 Messrs. Neal and Exell made the first return of gold with dollies in the Victoria district, and this was from the Natal Reef. Mr. Neal served in the Zulu War, and also under Captain Lendy in the Matabele disturbance in Victoria.

In 1895 they commenced work among the ancient ruins of Rhodesia, and discovered great quantities of ancient gold ornaments. Professor Bryce, who visited Messrs. Neal and Johnson when they were exploring Dhlo-dhlo Ruins, writes, in his *Impressions of South Africa*, speaking of their work, "So far as I could observe, all due care was being used by the gentleman (Mr. Neal) in charge of the exploration work at Dhlo-dhlo."

NOTE L

PROFESSOR KEANE'S "THE GOLD OF OPHIR—WHENCE BROUGHT AND BY WHOM?"

[Leading article London *Morning Post*, September 24th, 1901, on the above papers of Professor Keane.]

"In the current number of *Rhodesia*, the weekly paper which is devoted to the affairs of the immense territory associated with the name of Mr. Cecil Rhodes, Professor A. H. Keane concludes the interesting series of papers on 'The Gold of Ophir—Whence Brought and by Whom?' which he was moved to write by the claim recently advanced by Dr. Carl Peters that he had found evidence in the Zambesi Valley of Egyptian occupation anterior to the presence of the Phœnicians. Probably there is no topographical problem round which controversy has more fiercely raged than the identity of that land of Ophir whence came the costly treasures that found their way into the palaces of Solomon and David. Geographers, archæologists, philologists, and Biblical critics have impartially contributed to the bewildering array of suggestions offered to the searcher after truth, until at last it seemed that the discussion was interminable, and that, short of some brilliant and unexpected discovery, the problem was likely also to prove insoluble. Of course, it would be too venturesome to assert that Professor Keane has

succeeded in adducing evidence which places the identity of Ophir and Havilah beyond dispute, but he has certainly brought to bear on the subject a wealth of learning and a breadth of historical vision which bespeak for his theory the most respectful attention. The keystone of Professor Keane's explanation is his suggestion that Ophir is not the name of the country which produced the gold that enriched the Hebrew kings, but the name of the port of distribution. This port was situated on the south coast of Arabia, and the land of Ophir is identical with the region of Dhofar, which is, according to the late Theodore Bent, the Eldorado of the ancients. On this coast the harbour of Moscha, though now nearly blocked by a sandbank, is still deep, extending inwards for a mile and a half, and it is this port of Moscha which Professor Keane claims as the great emporium of the trade of the ancient world on the South Arabian coast. We cannot pretend to analyse the extremely ingenious arguments whereby he seeks to establish the accuracy of this thesis, but having identified Ophir as a port of distribution in Southern Arabia, Professor Keane proceeds to adduce proofs in support of his contention that Havilah, the gold-bearing land, is identical with Rhodesia, 'the mineralised region between the Lower Zambesi and the Limpopo—Mashona, Matabili, and Manica lands.' Tharshish, the port at which the precious metals and stones of Havilah were shipped to the civilised lands of the Red Sea, probably stood on the site of the present Sofala. But interesting as are the conclusions which Professor Keane has reached as to the identity of these famous places, his inquiry into the identity of the adventurous people who first colonised these ancient gold-bearing lands, not merely hundreds but thousands of years before the Christian Era, leads us into still more fascinating regions. Not only is Dr. Carl Peters's claim for the priority of the Egyptians rejected by Professor Keane, but a strong case is made out in support of the contention that the earliest gold workings which are found scattered throughout so large an area of Southern Rhodesia are the remains of an occupation by South Arabian Himyarites many centuries before the Phœnicians came into the country. In support of this conclusion, Professor Keane examines the evidence furnished by the ruins of ancient cities and fortresses in Southern Arabia, which have in modern times been examined by Bent and other travellers, and compares these relics of a bygone and vanished civilisation with the ruins which are scattered through-

out Southern Rhodesia. As yet the fragments of script found at Zimbabye afford a scanty basis on which to build conclusions drawn from the language employed by these ancient colonists, but such evidence as there is strongly corroborates Professor Keane's theory, and we may hope that when a more careful examination of the ruins is made additional inscriptions will be forthcoming as material for judgment. Certainly not the least interesting of Professor Keane's speculations in that in which, by a careful examination of the Malagasy language, he reaches the conclusion that the first colonists of our modern Rhodesia made Madagascar a halting place on their journey to the land whence they obtained their gold and silver and precious stones. Professor Keane's elaborate and scholarly study has given a new impetus and a new orientation to a perennial controversy. No one can ever say that the final word has been spoken in any discussion, and Professor Keane would certainly not claim finality for his judgment in a matter where we may hope shortly to have so much additional evidence at our disposal. But he has rendered service which the scholar and the practical man of affairs will alike recognise in boldly proclaiming that if Southern Rhodesia be not indeed the land of Ophir, it is yet the land from which Ophir drew its precious treasures."

NOTE M

THE STRAITS OF SUEZ

[G. J. HENDERSON]

In reference to Professor Keane's interesting articles in *Rhodesia*, September, 1901, on "The Gold of Ophir," I think that two important physical facts which had an immense influence on affairs in ancient times ought not to remain unnoticed. These are :—

1. The existence of a waterway for ships to pass between the Red Sea and the Mediterranean, with one or two interruptions, from the remotest historic times until after the Mohammedan conquest of Egypt, 638–40 A.D.

2. The climate of Egypt, Arabia, and Babylonia was not nearly so hot in ancient times as it is now, and that of Rhodesia and Africa south of the Equator was much hotter, but with a greater rainfall, making bigger rivers and more vegetation.

Reference to the works of Sir J. W. Dawson, the Canadian geologist, *Egypt and Syria: The Physical Features in Relation to Bible History*, Professor Hull's *Geological Survey of Egypt and Syria*, Dr. Wallis Budge's book, *The Nile: Notes for Travellers in Egypt*, published by Thomas Cook and Son, and Baedeker's *Guide to Egypt*, gives us a history of the changes which have taken place in the region of the isthmus of Suez.

Herodotus, the Greek historian and traveller who visited Egypt about 450 B.C., says: "Egypt is the gift of the Nile, and the delta is younger than the Egyptian people."

The delta is a triangular-shaped plain a few feet above sea-level, having its apex at Cairo, where the table-lands on each side of the Nile end and present cliff-like faces to the north.

The delta, being composed of Nile mud brought down by the river, must occupy what was once a shallow bay of the Mediterranean, having its coast-line from the cliffs of the Libyan Desert table-land west of Alexandria to near Cairo, and thence on to Suez and the Red Sea. Along this coast-line there are ridges of soft stone composed of fragments of shells and sea sand, which were thrown up by the sea before the delta existed. Further, in various parts of the delta there are sandbanks which are portions of the old sea-bottom projecting above the Nile mud deposits, which are now often occupied by the towns and mud villages of the people.

From borings made in several places in the delta under the mud at a depth of forty feet to fifty-six feet is found sand of which the grains are round desert sand, not sea or river-washed sand. In late Tertiary times, at a period earlier than when this area was a shallow bay, when the Mediterranean was smaller than at present, it is probable that this region was a desert, and that the whole Nile flowed eastwards into the Red Sea.

In the times of ancient empire the seat of civilisation was on the Upper and Middle Nile, and the delta, owing to its much smaller extent, its lower level and more constant inundation, was less important than at present. As history advances we find Memphis becoming more important, and finally cities far north in the delta itself. The record of the delta, however, has not always been one of gain on the sea. In geological history subsidences often proceed *pari passu* with depositions. We find that the delta has been subject to earthquakes, and that its northern border has been settling down, while a slight lifting up has taken place to the south

near Suez. Much of the ancient cultivable ground and many cities are now covered by the waters of Lake Menzaleh. The Arabian historian Masudi relates that this subsidence was going on as late as a hundred years before the Arab conquest.

About 2000 B.C. a portion of this now inundated land was in possession of a colony of Sati, or Asiatics, at Zoan (Tanis), from which they were expelled by Amenemhat, of the twelfth dynasty. The Asiatic invaders, however, not only regained this city, but made it their headquarters, and under the Hyksos, or shepherd kings, subdued the whole of the people of Lower and Middle Egypt.

It was under the rule of these foreign Pharaohs, who adopted Egyptian customs to a great extent, that the Israelites are supposed to have settled in Egypt.

The Land of Goshen was the strip of land from Cairo to the Red Sea, which was watered by one of the many branches of the Nile flowing from the neighbourhood of Heliopolis (called Beth-Shemesh, On, and Aven, in the Old Testament), *viâ* Lake Timsah and the Bitter Lakes into the Red Sea.

Along this valley runs the Fresh Water Canal, which supplies Suez and Port Said with water, and the surveys of the engineers since the British occupation make it certain that a branch of the Nile once ran along this depression into the Gulf of Suez.

The channel may have still been in use during the Hyksos occupation, but was either blocked up intentionally, or allowed to become filled during the unsettled times of the expulsion of these foreign settlers and the subsequent wars. How easily this could be effected is seen when we consider the way the wind blows in those parts, and its power of moving sand dunes and silting up the Gulf of Suez.

From October to May the prevailing south winds blow up the Red Sea, making the Gulf of Suez shallower and shallower with sediment. The usual tide at Suez is six and a half feet, but when the strong south winds are blowing, the water-level in the Gulf of Suez rises much higher than the level of the Mediterranean. Constant tidal currents must therefore have always been flowing through the ancient channel. From careful levellings it has been ascertained that the low-water level of the Red Sea and the Mediterranean is the same, with a usual tidal rise of one and a half feet on the Mediterranean shore and six and a half feet in the Red

Sea. Just as in former times the Isthmus of Suez was the scene of shifting water currents owing to difference in sea-levels and difference in tides, so it has always been at the same time the field of conflicting winds.

The power of wind for filling up channels and for turning fertile ground into desert by covering it with a layer of sand is only too well known to the people of Egypt, and by the present cost of dredging the Suez Canal in order to keep it open.

After the overthrow of the Hyksos supremacy by the new dynasty from Thebes in Upper Egypt and the expulsion of the foreign settlers, Seti I. re-opened the channel for navigation, and it was in existence, with one or two interruptions, and re-openings by Pharaoh Necho about 600 B.C. and by the Roman Emperor Trajan about 110 A.D., until some years after the Mohammedan conquest.

In 767 A.D. this ancient waterway between the Red Sea and the Mediterranean was finally closed, owing to a slight elevation of the earth's crust to the height of a few feet above sea-level taking place about ten miles north of Suez.

"THE REDS OF THE SOUTH."

Now, the story of this navigable channel is of great importance when dealing with the history of the Phœnician and Himyarite navigators of South Arabia.

According to all traditions and probabilities the Phœnicians were a branch of the ancient seafarers of the Indian Ocean, who had passed through the Straits of Suez and had formed settlements on the Syrian coast, where there was good timber for shipbuilding, as well as at important Egyptian coast and river ports.

Memphis, Heliopolis, and Bubastis all lay on the main channel of navigation connecting the Red Sea, Mediterranean, and Nile Valley. Memphis had its Phœnician quarter, and its patron deity had a Phœnician name—Ptah (The Opener). Heliopolis was the "City of the Sun" and of the sacred Red Bird of the South—the Phœnix. The Nile then flowed close by this famous city. Bubastis, the "City of Bast," the cat-headed goddess, to whose peculiar cult the modern world owes the domestication of "puss" (Biss, Bess, are the South Arabian names for cat), was situated at the junction of the Red Sea Channel and the most easterly branch of the Nile to the Mediterranean at Pelusium. It was a place of considerable importance, and must have been frequented by ships and seafarers from many different countries.

These Proto-Phœnician or Himyarite navigators of the Greater Red Sea had probably learnt the art of ocean sailing from that still more primitive seafaring people, the Proto-Malays, sometimes called the Oceanic or Malay-Polynesian race.

This pre-eminently maritime race had extended itself from isle to isle more than half round the world—from Madagascar, through the Malay Archipelago, across the Pacific nearly to South America. It is probably due to them that navigation flourished round the coasts and on the rivers of India and Ceylon, and that it was introduced by them to the peoples on the Persian Gulf and South Arabia. The Persian Gulf is commonly regarded as the cradle of navigation, but it is not likely to have been so. One of the essentials for such an art was lacking, viz. suitable timber for shipbuilding. This, of course, was plentiful in India and in the Malay Archipelago, as well as in Madagascar. Therefore, in all probability, the Proto-Malays long held the monopoly in ocean traffic, until the Semitic peoples turned their energies in this direction.

About the time of the Hyksos dominion and the eighteenth dynasty, 1600 B.C., the Phœnicians were cut off from their fellow-mariners of the south, and their enterprise was directed to the Mediterranean, the Atlantic, and the Northern Seas.

The Greek name Phoinix, Phœnician, means red, which is the meaning of the South Arabian name "Himyar," by which these southern seafarers were known. In ancient times the Indian Ocean, with its branches, the Persian Gulf and Red Sea, were all included under the name Red Sea. The name survives now in the Arabic Bahr-el-Ahmar, the one small portion of it which now goes by that name.

The Egyptian name for the countries south of the Red Sea was Pun-t, which appears to be the same word as the Greek Phœnix, and the Roman Poeni, or Puni, their name for the Phœnician people of Carthage.

The accounts of the Phœnician expeditions and King Solomon's ventures in the Old Testament clearly imply that the ships of Tyre and Sidon could pass through Egypt into the Red Sea on their way to Ophir and Tharshish. It is incredible that they should have sailed round Africa through the Straits of Gibraltar. They must have used this waterway by Suez on their voyages, and to bring the ships for King Solomon to Ezion-Geber at the north of the Gulf of Akaba

Probably the Pharaohs, like their successors in the Middle Ages, the Sultans of Egypt, charged heavy toll dues for the transport through the delta, and this led Solomon to make Ezion-Geber in Edom the headquarters for his expeditions instead of Tyre, in order to avoid the tariff of Egypt.

NOTE N

CLIMATE IN ANCIENT TIMES

[G. J. HENDERSON]

THE matter of the climate of countries in ancient times is much neglected by historians.

The climate of the different countries of the earth has not always been the same as it is at present, but many of them have passed through warm, mild, and cold periods even within the historic period. Going further back, to the period dealt with by geology, our northern hemisphere shows evidence of very great variations of climate from that existing at present.

At a comparatively recent period, within the age of man's existence in Europe, glaciers extended from the North Pole down to the Thames valley, covering the whole of the north German plain far into Russia, whilst Canada and the northern parts of the United States were in a similar Greenland-like state. At intervals during this process of glaciation there is evidence of the climate as far north as the pole being of a temperate and at times even semi-tropical character.

Dr. Croll, in his work on *Climate and Time*, explains these great variations of climate in our northern world as due to the difference in the shape of the earth's orbit round the sun, which is well known to astronomers to have existed some tens of thousands of years ago. At present the orbit approaches nearly to a circle. But even this slight ellipticity is quite sufficient to produce a variation in the mean annual temperature distributed to the earth north and south of the Equator, causing each half to pass alternately through periods of hot, cold, and intermediate temperature.

In the course of every 21,000 years the earth goes through a cycle of changes in its position to the sun in its annual revolutions,

with the effect that during several thousands of years the northern hemisphere receives more heat from the sun annually, and during several thousands of years the south is the more favoured. When, owing to the attraction of the larger planets the earth's orbit was, at the time of the Great Ice Age, much more elliptical, the earth at one time of the year was much nearer the sun than at present, whilst at another time it was much further away.

The effect of this was to intensify the mild and cold conditions north and south of the Equator, which take place when the orbit is almost circular. During the period of the Great Ice Age in the north, the Antarctic must then have been a genial world—if not devoid of ice, at any rate vastly different from the present. When the North Pole was passing through its mild periods the glaciation in the southern world must have been enormous. The present southern ice cap, if placed on the North Pole, would come nearly to Scotland. The cap that existed formerly actually reached as far as South Africa, with glaziers on the Drakensberg mountains, extending to the Transvaal, over the whole south island of New Zealand, and over South America as far north as Valparaiso.

The earth's hemispheres, however, have not for many thousands of years in the past been subject to such great vicissitudes of climate, but only to milder alterations of cold and hot periods, and such will continue to be the case for many thousands of years to come. But these alterations, though comparatively moderate, are sufficient greatly to affect mankind.

Climatic changes have greatly affected the migrations and doings of mankind in the past, and will continue to do so in the future. Civilised man seems to be a creature thriving best in a zone of between 40 to 60 degrees mean annual temperature, and civilisation seems to have migrated with these zones of temperature from one part of the earth's surface to another.

We now come to take into consideration the changes of temperature, distribution of land and water, prevailing winds and rainfall, and other physical facts which have affected the settlements and movements of the races of mankind.

About 650 years ago the earth was in such a position towards the sun in its annual revolution as to receive the highest possible mean annual temperature in the northern hemisphere. From that time the northern half of the earth has been getting colder, and in the course of 10,000 years the climate of England will be almost arctic.

On the other hand, the southern half of the earth will continue to get warmer, and ultimately such places as Australia, South Africa, and the Argentine will be almost tropical in temperature.

Looking backwards to about 9000 B.C., the period when the northern hemisphere was in the position now held by the southern, Europe, North and Central Asia, North Africa, and North America must have been much colder than at present. The land round the North Pole must have been covered with a great deal more ice than at present, but seeing that the amount of water in the northern parts of the globe is, and was then very small, the polar glaciation in 9000 B.C. was nothing in comparison with that round the South Pole at the present day. The all-embracing deep ocean in Antarctic regions supplies an immense amount of vapour which keeps up the supply of snow falling on the southern ice cap.

The southern world to-day is very much colder than our northern hemisphere. The ice extends from the South Pole to about 10 degrees nearer the Equator than is the case in the north, and the temperate zone of the south does likewise, so that Sydney, Cape Town, and Buenos Ayres, with the mean annual temperature of Genoa, are as near to the Equator as Morocco.

When the northern hemisphere was receiving only the amount of heat at present received by the south, the climate of Morocco must have been as cold as England to-day, whilst England, though not glaciated, owing to the small amount of sea in the northern hemisphere, must have been as cold as North Norway. Countries like Egypt, Arabia, and Babylonia, in 9000 B.C. must have resembled Europe to-day as regards temperature.

About 2000 B.C. both hemispheres received the same amount of heat from the sun. Consequently the climates of Europe, North Africa, and South-West Asia, though not so cold as in 9000 B.C., were not nearly so warm as they are now. The climate of England would be more like South Norway, Spain more like England to-day, and Egypt, Babylonia, and Arabia more like South Europe and Algiers and Morocco at present.

Thus we can see how the climate of the seats of old civilisation has gradually become less suitable for energetic life, also they must have changed in other physical characteristics.

In 9000 B.C. much of the Sahara was probably a fertile country, with plenty of rain and rivers; whilst the great Caspian-Aral depression in Central Asia was probably covered with a Mediterranean

Sea connected with the Black Sea, and perhaps with the Baltic, and with the Arctic Ocean, over the flat country through which now flows the River Obi. As the climate gradually became warmer and less rainy, this inland sea evaporated and decreased in area, until its deeper part is now eighty feet below the level of the Black Sea.

This sea may still have been extensive even as late as 1000 B.C., and as long as it was so must have exerted a great climatic influence upon the countries around it. Other large inland seas also existed in these times in Central Asia, remnants of which still survive in Persia and Thibet. The effects of these large tracts of water must have been to make the summers of these surrounding countries—which are now very dry—moister, and to have done away with the great tracts of dust and sand which are always blowing about in these regions at present. The winters of countries lying to the south must also have been moderated.

Their drying up was probably the cause of those great race movements from Central Asia into Asia Minor, India, Persia, Mesopotamia, and Europe, with which we are confronted at the dawn of history, which have led many ethnologists to regard Central Asia as the cradle of the human race.

In Africa 2000 B.C. the zone of almost constant precipitation must have been along the Equator, not from five to 10 degrees north of it as at present, and the zone of periodic rains must also have extended more to the south. This would have had the effect of making Rhodesia and Africa just south of the Equator a moister country, with larger rivers and lakes than it has now, although its mean annual temperature was then hotter than that of to-day.

These main facts as to the annual amount of sun's heat distributed in different parts of the world, combined with geological evidence as to the distribution of land and water at these not very remote periods, ought to enable us to form a rough idea of the changes of climate which have taken place, slowly and surely, during prehistoric and historic ages.

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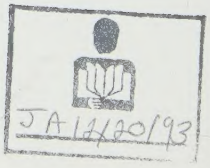
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